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# THE CLINICAL ASPECTS OF AMEBIASIS*

SIDNEY K. SIMON, M. D.
NEW ORLEANS

The outbreak of an acute fulminating type of intestinal amebiasis in Chicago during the past summer and the great amount of publicity it attained has caused a reawakening of interest throughout the entire country in the many sided problems presented by the disease. While to most of us in the Southland the existence of amebic infections has long since been recognized and has found a place in routine clinical procedure, it would appear that medical sources in the North and West, in many instances at least, still fail to comprehend the widespread distribution of the organism in their midst. Field surveys conducted in various cross sections of the country have shown that infestation with *Endamoeba histolytica* is present in approximately 9 per cent of the population, irrespective in great part, of climatic influences. Soil contamination and poor sanitary conditions in general, such as were found to exist by Faust in Weis county, Virginia, and by Meleney in the mountainous regions of Tennessee, unquestionably produce an increase in the degree of infectivity. In the large as well as small urban centers in addition, the infection is conveyed frequently by food handlers who are themselves carriers of *E. histolytica*. In a series of approximately one thousand white persons in New Orleans, Faust found an average incidence of 13.6 per cent infestation, while similar examination by Johns among a higher economic group indicated only 8 per cent infection. Incidentally, these figures are considerably lower than those found in the Virginia and Tennessee surveys. Kofoid's statistical table of infection with the pathogenic ameba among Army recruits from all sections of the country during the world war, was 12 per cent. Quite recently Bunderson, Rawlings, and Fishbein, in a survey of the personnel of one Chicago hotel reported 18.6 per cent infestation. Final statistics upon the recent epidemic of acute cases in Chicago extending through January 1934, comprise 721 clinical cases distributed among 206 cities, all originating from the one source. One thousand forty-nine carriers of *E. histolytica* were discovered in the limited survey made in Chicago by the health authorities. In an article published by me in 1919 I stated: "Until rather recent times amebiasis has been universally associated with the tropics. While the transmission of endamebic infections is fostered by certain climatic and sanitary conditions incidental to warm countries, it has been shown that the infection is capable of being disseminated with great facility in many regions outside of the tropics as well. The malady is therefore not to be considered as indigenous to any particular locality, but on the contrary, is to be viewed as a widely distributed infectious condition, reaching out into practically every part of the habitable world." The records of the past fifteen years bear out the truth of this statement.

The recent Chicago episode constitutes a solitary, isolated incidence of a spontaneous acute outbreak of amebiasis in a civilian population. Prior to this, acute fulminating cases of similar type have been encountered solely in closely habitated groups of individuals, or where military units have been brought into heavily infected districts during times of active service. The source of the infection in Chicago was at

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first thought to have been due to the food handling personnel of a certain large hotel, but eventually was traced definitely to defective plumbing installation whereby the sewerage disposal gained access to water supply tanks, as well as to the refrigerating plant. Because of the acute fulminating character of the symptoms in the cases it was likewise thought in the beginning that complication with the organisms of the bacillary dysenteric group constituted the predominant factor. However, cultural examinations of the stools and agglutination tests demonstrated that this was not true in the vast majority of instances. The virulency of the attack and the high mortality exhibited in the group of cases (5 per cent) was caused by high concentration of numbers of cysts ingested. One of the important lessons brought out by the Chicago epidemic, with its tragic sequelae, has been the awakening of medical consciousness to the fact that amebiasis at any time may present a sanitary problem of similar magnitude in other communities. A further point that should be constantly stressed in this connection is that not over 2 per cent of individuals who are infected with *E. histolytica* ever present outspoken clinical phenomena. The larger proportion by far remain carriers, but are none the less potent factors in the further transmission of the infection.

## ETIOLOGY

Though as many as five species of endameba are known to inhabit the intestinal tract of man, the *E. histolytica* is alone pathogenic. The mode of transmission of the infection is conducted solely by means of the encysted organism. The vegetative endameba is capable of repeated reproduction within the intestinal tract of the original host by biniary fissure, but does not participate in the conveyance of the infection to a new host. In contrast to the harmless species, the pathogenicity exhibited by the trophozoites of *E. histolytica* is the result of its tissue invasive power. When the environment becomes inimical to the life processes of the vegetative stage of the organism, a resistant wall or coating is secreted by the cell behind which the viable ameba enters into a quiescent period. The final stage of this cycle results in the reproduction of four daughter amebas. These embryonic organisms are not capable of release within the original host, but are eventually set free in their passage through the upper alimentary tract of the new host through digestion of the cyst wall. The mode of transmission of the cyst bearing fecal material from host to host is conducted as follows: (1) by means of contaminated fingers of food handlers who are themselves carriers of the infection; (2) through the agency of vegetables and fruits, which have been grown in soil contaminated by infected human feces; (3) by droppings from the common house fly and other insects; (4) distribution of water supply which has become contaminated either directly through the soil or by admixture with infected sewerage material as occurred in the Chicago outbreak. While excystment of the daughter amebas takes place in the small intestine, colonization of the organisms is confined entirely to the ileo-cecum and the colon. The *E. histolytica* is enabled to invade the epithelial structure of the bowel wall by means of a cytolytic substance it secretes. Colonization occurs first in the surface layers of epithelial cells, but the motile organisms eventually penetrate the basement membrane to find lodgment in the submucosal structures. The incubation period of amebiasis cannot be predetermined; much would seem to depend upon the number and concentration of cysts ingested, as well as upon the receptivity of the host to the invading organisms. Sellard's and Walker's classical experiments in 1913 with volunteers from prison inmates exhibited an incubation period which varied from 20 to 95 days. Among the Chicago cases many showed an incubation period of less than a week.

## CLINICAL ASPECT AND DIAGNOSIS

It is difficult to draw a composite clinical picture within brief confines to cover the many widely diverse manifestations of amebic disease. The symptomatology may vary from that of a stormy and highly acute fulminating character to almost unrecognizable quiescence or latency. This inconstancy and lack of uniformity in the clinical phenomena is due to various factors: (1) The relative virulency displayed by the organism under variable conditions; (2) the receptivity or reaction of the host to the infection, involving as it does the element of indigenous or acquired immunity; (3) the location of the active lesions and the extent of involve-

ment of the structure of the large bowel; (4) concomitant or secondary invasion with bacterial organisms. The kaliedoscopic picture thus offered may be classified for greater clarity into the following groups: First, a markedly acute, highly toxic type of dysentery which is the result of the spontaneous ingestion of heavily concentrated infective material. Such cases cannot be distinguished by purely clinical criteria from epidemic bacterial dysentery. Second, a less virulent, acute type, which occurs as a relapse in the course of a chronic intestinal amebiasis. Third, a low grade, insidious form of chronic colitis with periods of activity alternating with quiescency. This group exhibits the usual clinical features of a chronically invalided colon but with somewhat greater tendency to hemorrhage than is present in bacterial colitis. Periods of obstinate constipation occur, which may be succeeded at variable periods by diarrheal or dysenteric outbreaks. Fourth, apparently symptomless or latent amebiasis including the so-called carrier state. Fifth, various atypical clinical conditions which may be demonstrated to result from a latent amebic infection of the bowel such as secondary anemia, unexplainable loss in weight, anorexia, nausea, and other digestive disturbances, backache, abdominal pains suggesting surgical lesions in the appendix, gallbladder, etc.

The diagnosis in all forms of amebiasis depends in the final analysis upon the detection of the *E. histolytica* in the bowel passages and secretions. For this reason, routine examinations of the stool should be made in all cases, whether the patient presents suggestive intestinal involvement or not. In order to positively rule out amebic infection, at least three examinations are necessary. A satisfactory check upon the accuracy of diagnosis in some cases, lies in the demonstration of the presence of the vegetative, as well as encysted forms of the organism. This is the usual procedure in my own experience. In the event that only cysts are discovered in the stool, the patient is given a saline purgative whereby motile pathogenic amebas appear in the liquid stool. On the other hand, cases presenting active diarrheal or dysenteric manifestations will often exhibit encysted forms within a few days after astringent drugs have been employed. No highly trained laboratory technic is needed for the discovery of *E. histolytica* in the feces. The vegetative organisms do not require staining reactions for their detection. Any active ameba presenting sharp-pointed outbursts of the clear hyaline ectoplasm in contrast to the centrally located granular endoplasm, can be definitely designated as *E. histolytica,* whether it contains red blood cells or not. The cysts are small quiescent bodies with a refractile shell wall and may be recognized most readily by means of the iodine eosin stain of Davidson. On a reddened background the cysts stand out as a faintly brown or brownish-green oval body containing four deeply stained brown nuclei. The employment of culture methods or the complement fixation test, while valuable in isolated instances for diagnostic purposes, does not come within the scope of the average clinician. The therapeutic test for amebiasis is mentioned merely to condemn it. The clinician should cease to use amebicidal agents in indeterminate cases of intestinal involvement because of their potential harm in many instances.

### TREATMENT

Much water, so to speak, has run under the bridge since the inauguration in the early years of the present century of a more scientific plan of treatment of amebiasis. A brief review of the varied methods employed since this time will help to clarify at least our present day conception of the therapy of the condition. Of fundamental importance in this connection is the need now as always to distinguish between the mere temporary alleviation of the clinical phenomena on the one hand and the complete permanent eradication of the infection from the body on the other. In 1909 the writer, after recording repeated failures with the treatments then in vogue, suggested the employment of the powdered ipecac root in enteric coated pill form as a specific remedy for the disease. At this time I was able to report fifty cases permanently cured by this method. Though confirmation of these results was obtained from numerous sources, unfortunately no means could be found to control the pronounced emetic action and other bedside disadvantages of ipecac therapy. A step in this direction was thought to have been rendered by Rogers in 1912 upon the introduction of hypodermic medication of

emetine, an alkaloid extracted from the ipecac root. For the succeeding decade this drug held first place, and almost complete sway in the therapy of amebiasis, in spite of well grounded objections on the part of many observers, including myself, relative to the inadequacy of the alkaloid as an effective means of removing the tissue imbedded organisms. Moreover, it was found that emetine, even when administered in minimal clinically effective doses of one grain per day for ten days, frequently produced definite toxic sequelae. Its inhibiting effect upon the pathogenic trophozoites has, however, never been questioned, so that its use today should be restricted entirely to the clinical relief of the immediately active manifestations of intestinal as well as hepatic amebiasis. The uncertain effect of emetine upon the chronically infected patient led finally to the introduction of a new group of synthetic compounds, some of which have shown evidence of considerable destructive potency upon the pathogenic ameba. The first of this group to gain recognition was yatren 105, a complex chemical product containing 28 per cent iodine in combination with oxyquinolin sulphonic acid. This drug was used during the World War as a wound antiseptic and tissue stimulant, but in 1921 Muhlens and Menk ventured to employ it originally in cases of amebiasis. The light yellowish powder is prepared in pill form of four grains each with enteric coating of metallic sheen. Subsequently a similar agent was trade marked under the name of anayodin. Chiniofon has been urged as the more scientifically correct terminology. The points of advantage possessed by chiniofon are its definitely proven amebicidal action, the ease of administration of the drug without the necessity of stringent dietetic restrictions as well as the lack of serious toxic phenomena. At times a diarrhea is produced during its administration, which will necessitate reduction in the dosage from four to two pills three times a day or perhaps substitution of another agent.

Though arsphenamine preparations were employed intravenously in the treatment of amebiasis as early as 1910, their use never gained wide recognition because of lack of effectiveness. Though the protoplasmic action of arsenicals upon protozoa had become well established, it was not until 1924 that Marchou was able to discover an arsenical preparation worthy of merit for the destruction of pathogenic amebas. The chemical combination of this drug was acetylamino-phenyl-arsenic acid, commercially designated as acetozone or stovarsol. A companion drug of slightly varied molecular composition termed treparsol, introduced a year later, though containing more arsenic, was found capable of more rapid excretion from the body than stovarsol and therefore proved less toxic. Both drugs were administered by the oral method in tablet form without enteric coating. A host of enthusiastic supporters sprang up in favor of these arsenical compounds and for a short period they were extensively employed. However, many instances of arsenical toxemia were recorded so that their use ultimately became considerably restricted. More recently a futher arsenical product named carbozone has been offered through commercial channels as an amebicidal agent. This latter drug is a crystalline solid without odor or taste and contains approximately 28 per cent of arsenic. It is administered in capsule form in doses of four grains twice daily covering a period of ten days. Reed, Anders, and Leake, among many others, have reported favorable effects from carbozone in a series of forty amebic cases, including the active types of the disease as well as the latent or carrier state. Follow up observations were made over a period of three months. All the patients were freed from *E. histolytica* and thirty-six remained so after a further observation of four and a half months. No toxic effects from the drug have, as yet, been observed. Should the organisms be found in the stool after the initial treatment, further dosage with the drug is necessary after an intervening period of one month. My own experiences with carbozone, though up to the present time comparatively limited, has nevertheless proved favorable. When contraindications to the use of arsenicals are present, such as degenerative states of the vascular system or viscera, other agents must needs be employed.

One important and highly practical feature possessed by all the recently introduced synthetic remedies for the cure of amebiasis has centered upon the comparative simplicity of

their administration. The ipecac plan of treatment of necessity involved marked restrictions in diet with the patient lying in bed for a period of approximately two weeks. The administration of the new compounds, on the other hand, I have found in my experience, may be carried out with equal success when the patient is ambulant and is likewise permitted to enjoy a slightly modified though liberal diet. Finally, I believe it should be stated that though ipecac therapy has been to a great extent displaced by the newly introduced amebicides, its well established, old time specific effect upon all stages of *E. histolytica* should still be recognized and its use preserved for the more intractable types of infection with which we are at times confronted.

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## REVIEW OF 112 CASES OF AMEBIASIS*

M. D. HARGROVE, M.D.
SHREVEPORT, LA.

The material for this paper is taken from the records of the Shreveport Charity Hospital during the years of 1930-1933, inclusive. The record of all cases discharged with the diagnosis of amebiasis, and its complications have been reviewed, discarding those cases which were not proven by stool or sigmoidoscopic examination or by autopsy findings, except for three cases included because the clinical history and response to treatment were so characteristic as to leave little if any doubt as to the diagnosis.

There has been a consistent increase in the number of cases, from 6 in 1930, to 52 in 1933. This increase is due, undoubtedly, to greater familiarity with the disease and the resulting accuracy in diagnosis, rather than representing an increased incidence. Increasing familiarity with amebiasis had made us consider it as the possible diagnosis in all cases of bowel disturbance, vague digestive complaints, weakness, and loss of weight. The stools in these cases are examined several times for active ameba or amebic cyst and if possible they are sigmoidoscoped.

During the four years, there has been a total of 112 cases, of which 9 had liver abscesses, 8.04 per cent, and 22 expired, a mortality of 19.64 per cent. The cases have come from 28 parishes, illustrating the widespread distribution of the disease in North Louisiana.

There were a few more cases among the white patients than among the colored, 64:48, but the difference is not great. There is a striking difference in the incidence among the males and females, 90:22. The largest number of cases has occurred during the third and fourth decades, which is probably due to greater exposure during this period of life. One case occurred at 8 years, who was discharged in 35 days as cured.

Thirty-eight of these patients gave a definite history of previous attacks of diarrhea, which dated back from 2 months to 34 years. Four gave a definite history of no previous attacks of diarrhea, and in 71 cases this point was not mentioned in the history, a number of whom we may safely conclude had had previous attacks. In 72 cases, the present attack had existed for less than 4 months and of these, 34 had existed for less than one month. In 22 cases a definite history of previous treatment was obtained and in these the only drug mentioned was emetine. These figures certainly attest to the chronicity of the disease and to the failure of treatment if not intensive and thorough. When each of these 38 cases is viewed as a carrier for a period of time, varying from 6 months to 34 years, they become of increasing importance as a health problem.

The chief complaint varied considerably. In 81 cases, diarrhea was the major complaint. It was mentioned alone in 49 cases and associated with blood, or pain, or blood and mucus in 32 cases. The next most common complaint was abdominal pain which occurred in 28 cases. Weakness was one of the major complaints in 11 cases and loss of weight in only 3. Dermatitis occurred as a chief complain in 2 cases, diagnosed as pellagra, which was certainly aggravated if not produced by the amebiasis.

The major points noted in the physical examination were abdominal tenderness, loss of weight and enlarged liver. Abdominal tenderness occurred in 68 cases. The tenderness varied from a diffuse and rather marked tenderness to that which was mild and located in some region along the colon. Loss of weight, while

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occurring as a major complaint in only 3 cases, was noted on examination in 44 cases and varied from 10 to 60 pounds. An enlarged and tender liver was noted in 7 cases, all with amebic abscess of the liver. Ascites was noted in one case apparently due to rupture of an amebic liver abscess into the peritoneal cavity.

The stools or the sigmoidoscopic examinations or both were positive in 89 cases. These examinations were negative in 9 and not performed in 14 but of these 23 cases, 6 were definite amebic liver abscesses and 14 came to autopsy. It is to be noted that the stools were negative in 16 cases in which the sigmoidoscopic examination was positive, ulcers from which motile amebas were found. Repeated careful stool examinations should establish the diagnosis, but the sigmoidoscopic examination, a relatively simple procedure, is of vast help and should certainly be performed in all doubtful cases or before the possibility of amebiasis is discarded.

A total white cell count and differential was done on 67 patients, the total count varying from 5,000 to 35,875 and was elevated in 47 cases. In two patients with counts of 19,550 and 23,950, the count was repeated after treatment and in both cases had returned to within normal limits. The differential count showed a slight elevation of the neutrophils, in the majority of cases with increased white cell count, but seldom over 80 per cent. Accepting 3 per cent as the upper limits of normal for eosinophils, they were found increased in 15 cases. The highest was 29 per cent and the average for the 67 counts was 2.4 per cent. We must conclude from these figures that an eosinophilia is not usually found in amebiasis. A total red count and hemoglobin estimation was done in 44 cases. A reduction in red cells was noted in 11 cases.

The treatment in these cases has varied somewhat but the majority received emetine hydrochloride hyperdermically and anayodin by mouth. Occasionally, toxic symptoms from emetine were noted and anayodin apparently aggravated the diarrhea in a few cases. No other disturbing symptoms were noted. A few cases received stovarsol and carbason with apparent success. In two cases transfusion was necessary, because of the low red cell count. A few cases received enemas of ipecac or quinine, with doubtful benefit.

The permanent results of treatment in the uncomplicated cases are rather difficult to determine exactly. Forty-eight patients left the hospital before completion of treatment but definitely improved. They were given instructions as to continuation of treatment. Six patients left before treatment was begun or within 3 or 4 days after treatment was begun. Twenty-nine patients completed the full course of treatment consisting of emetine and anayodin and were completely relieved of all symptoms on discharge.

The results were not always so satisfactory as illustrated by one case, a white male aged 14 years, who was under treatment three different times during 1932, remaining in the hospital about three months. During his stay in the hospital he was intensively treated with emetine, anayodin and stovarsol. On his second admission, he developed symptoms of acute appendicitis. The appendix was removed, smears from which showed ameba. On his third admission, he was still having four to five stools daily containing some blood. Amebas were not found at this time but a barium enema revealed definite evidence of colitis. His amebic colitis had evidently not been controlled by treatment or he had developed a secondary ulcerative colitis.

There were nine cases with amebic abscess of the liver. They were all males, six white and three colored and their ages varied from 23 to 51 years. In four cases there was a definite history of previous diarrhea and the stool examination was positive for ameba in 3 cases, negative in three cases and not performed in three cases. The maximum temperature varied from 99.6° to 104° and the total white count was increased in 5, varying from 10,200 to 18,300. One of these patients expired following one aspiration and surgical drainage. At autopsy he was found to have an amebic abscess of the liver which had perforated through the diaphragm with abscess formation in the lower lobe of the right lung. One case apparently ruptured into the peritoneal cavity prior to admission with the formation of a large quantity of chocolate colored fluid in the peritoneal cavity. After four aspirations of the abdominal cavity he developed drainage from an umbilical fistula.

The fistula drained for several weeks, during which time he received active treatment and was eventually discharged improved. Seven cases were treated by aspiration and anti-amebic treatment with complete recovery. Four of these cases have been reported previously.

There were 22 deaths of which 16 came to autopsy. Of the 22 deaths, a definite anti-mortum diagnosis of amebiasis was made in nine cases, by stool examination and 13 were not diagnosed. All of the six cases which did not come to autopsy, were diagnosed anti-mortum. One of these patients was in the hospital less than 30 hours, admitted in a semi-comatose condition. A stool examination was positive for Entamoeba histolytica, but he expired before treatment could be started. The other five cases ranged from 54 to 73 years of age, and were complicated by renal or cardiac lesions. Two of these developed a broncho-pneumonia, which was the immediate cause of death. In three cases, emetine may have been a contributing cause by its toxic effect on the heart.

Of the sixteen cases that came to autopsy, there were eleven males and five females, six white and ten colored and their ages varied from 17 to 70 years. The duration of symptoms varied from three weeks to twelve years.

Of the sixteen cases, six died of peritonitis. In one case the peritonitis was secondary to a self inflicted wound following ileostomy. He had had amebic colitis for five years during which time he had frequent recurrent attacks of diarrhea. He was admitted twice during 1933, signing a release after some improvement on first admission, but returning in about two weeks, having from 20 to 30 stools daily. On the second admission as he failed to respond to treatment, ileostomy was performed, with the idea of resting the colon and more effectively applying medication. About four days later, he inflicted a wound in the abdomen which resulted in peritonitis and death.

The other five cases developed peritonitis following perforation of amebic ulcers. Perforation occurred in the sigmoid in four cases, alone in two, associated with perforation of caecum in one and perforation of descending colon in one. Perforation of the caecum occurred alone once and with perforation of the sigmoid once. None of the patients were under active treatment for amebiasis. One died on admission and one, twelve hours after admission. Two were in the hospital three to four days each, one with the diagnosis of typhoid fever and one undiagnosed. One patient was under treatment on the genito-urinary service.

Two cases died as the result of hemorrhage, one a Belgian aged 30 years, had had amebiasis for about twelve years. He had been diagnosed as having tuberculous colitis a number of years previously and had been treated as such. Apparently the diagnosis of amebic colitis had not been made previous to his admission and he had no treatment. Active ameba were found on proctoscopic examination but about 48 hours later he had a profuse hemorrhage from the bowel and expired shortly afterwards. At autopsy, several perforations were found throughout the colon with well circumscribed peritonitis.

The second case, a white female, aged 16 years, had been sick for about three weeks, growing rapidly weaker and more toxic during this time. She was in a very critical condition and had a profuse hemorrhage shortly after admission, expiring a few hours later. Autopsy showed many ulcers of the ascending transverse and descending colon, all apparently of recent origin. Sections from the ulcers were quite positive for Entameba histolytica. This was apparently an acute fulminating case. From the history obtained later it was learned that the grandmother had expired about ten days prior to onset of this patient's illness, from a similar condition.

One case, a colored male, aged 25 years, expired following surgical drainage of an amebic abscess of the liver, which at autopsy was found to have ruptured through the diaphragm, producing an abscess in the lower lobe of the right lung, with abscess of the left lobe of the liver and amebic ulcers involving the terminal ileum, caecum and entire colon.

Three cases were diagnosed clinically as pellagra, all having typical clinical findings. At autopsy they were found to have extensive amebic infection extending throughout the entire colon. Undoubtedly the pellagra was secondary to the amebic infection.

Of the four remaining cases, two showed a rather profound anemia associated with the

amebic colitis and one an old occlusion of the descending branch of the left coronary.

The location of the lesion in the bowel varied. One case had involvement of terminal ileum and entire colon, and 9 cases had extensive envolvement of the entire colon.

CONCLUSIONS

1. Amebiasis occurs frequently in North Louisiana and produces a variety of symptoms.

2. Amebic abscess of the liver is best treated by aspiration combined with active anti-amebic treatment.

3. The most common causes of death in amebiasis are peritonitis from perforated ulcers and intestional hemorrhage.

4. Its association with pellagra is to be noted.

DISCUSSION

**Dr. John B. Elliott, (New Orleans): I wish to stress two points in the discussion of amebiasis:**

**First—We must not depend on a stool examination alone; a proctoscopic examination is absolutely necessary before we can exclude the presence of ameba.**

**Second—We must be very careful in using the word CURE in this disease. When we see the slides shown by Dr. Hargrove we must realize that the ameba is very deeply inbedded in the muscular coat of the bowel, and can live there quiescent for ten years and more; re-crudesence is much more common than re-infection.**

**I use emetine only in the primary attacks, but use anayodin for years, giving it as I do mercury and potash in tertiary syphilis.**

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# THE DIAGNOSIS OF TYPHOID FEVER IN INFANCY AND CHILDHOOD*

**A Study of 75 Cases**

C. H. WEBB, M. D.
SHREVEPORT, LA.

It is probable that many cases of typhoid fever in infancy and early childhood are not recognized. This is essentially a disease of youth and early adult life, unexpected during infancy. In addition, the symptoms are often unusual, and the physical findings may be confusing. Yet typhoid remains sufficiently prevalent to cause many deaths, and alertness is necessary to recognize it in its variable manifestations. To that end it is deemed valuable to review 75 cases of typhoid fever in infancy and childhood studied in practice and on the pediatric service of the Shreveport Charity Hospital during the years 1932 and 1933.

Of these 75 infants and children, 31 were white and 44 colored; 46 were male and 29 female. They have been divided into two age groups for convenience in comparison, i. e., those from birth to 5 years, 24 cases; from 6 through 12 years, 51 cases.

AGE INCIDENCE

It is generally agreed that during the first year of life the disease is infrequent. Holt and Howland[1] reported only 5 cases of typhoid fever in infants under 1 year, among 14,000 admissions to Babies Hospital, New York. Of 200 cases of typhoid in children, Abt[2] found only 2 cases under 1 year, and Adams[3] similarly discovered only 1 at this age among 337 children with the infection. Percy[4] collected, from the literature, 4717 cases of typhoid in children, of whom only 2.2 per cent were under 2 years of age. On the other hand, Griffith[5] personally observed 75 cases under 2½ years, of whom 9 occurred in the first year. Cases have been reported at 21 (Gerhardt[6]) and 26 (Weech and Chen[7]) days of age. In our series, reference to Fig. I shows that 3 cases (4 per cent) occurred in the first year and 7 (9 per cent) by 2 years of age. Our youngest patient was 6

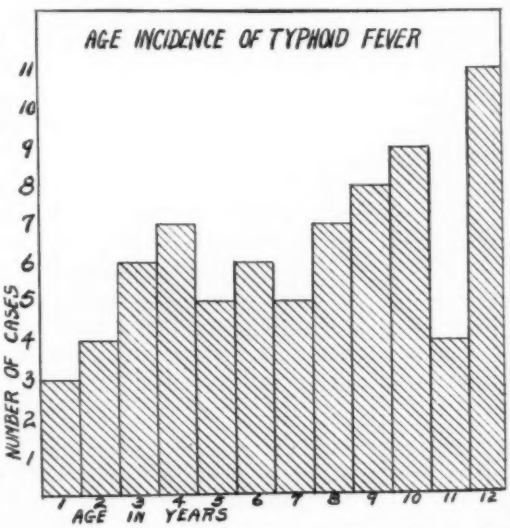


Fig. 1. Note the presence of 3 cases within the first year and 7 cases within 2 years.

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months old and in this instance the diagnosis was established only at autopsy. In general, 12 to 15 per cent of all typhoid fever occurs in children up to 12 years of age[8].

SEASONAL INCIDENCE

Although typhoid is generally known to be an autumn disease (Osler and McCrae[9]), it is

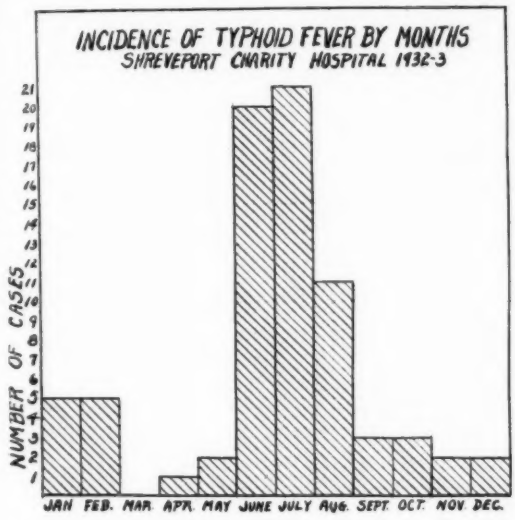
INCIDENCE OF TYPHOID FEVER BY MONTHS
SHREVEPORT CHARITY HOSPITAL 1932-3
NUMBER OF CASES
JAN FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Fig. 2. Note the striking preponderance of cases in children during the summer months.

notable that the peak of incidence in this series (Fig. II) occurred in early summer, when the prevalence of ileocolitis may cloud the diagnosis. A recent report from Japan by Yagi[10], relating to typhoid fever in infants, likewise reveals a greater incidence in the early summer months.

ONSET OF THE DISEASE

The insidious onset with malaise and slowly mounting fever, typical of the infection in the adult, is less frequent in the older child and unusual in the infant. Only 6 of the total of 24 cases under 5 years showed such onset, and even in these the temperature mounted more rapidly. In the older group, a gradual onset was seen in 23, or almost half of the 51 cases.

TABLE I

ONSET OF THE DISEASE

| | Under 5 years | | Over 5 years | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Total cases | 24 | | 51 | | 75 | |
| Gradual with malaise | 6 | 25 | 23 | 45 | 29 | 39 |
| Sudden with high fever | 14 | 58 | 12 | 23 | 26 | 35 |
| Headache | 9 | 37 | 28 | 55 | 37 | 49 |
| Abdominal pain | 12 | 50 | 21 | 41 | 33 | 44 |
| Chills | 6 | 25 | 16 | 31 | 22 | 29 |
| Diarrhea | 5 | 21 | 13 | 25 | 18 | 24 |
| Vomiting | 8 | 33 | 5 | 10 | 13 | 17 |
| Nosebleed | 4 | 17 | 7 | 14 | 11 | 13 |
| Constipation | 5 | 21 | 2 | 4 | 7 | 9 |

It is to be noted that most of the cases under 5 years were sudden in onset. Fever, headache and abdominal pain are frequent early symptoms.

More frequent in the younger child is a sudden onset with high fever, accompanied by chills, vomiting, abdominal pain or nervous symptoms. Such onset occurred with over twice the frequency of the gradual type in our younger children. It would seem that the one characteristic of the onset of the disease in infancy and early childhood is the variability of the symptom complex. This is illustrated by the three babies under one year in the present series, one of whom presented with diarrhea and fever; a second with fever, vomiting and convulsions; the third with all symptoms, except fever, masked by an upper respiratory infection.

Reference to Table I reveals abdominal pain as a prominent early symptom in half of the younger group, vomiting in one-third and chills in one-fourth. Headache, one of the most frequent symptoms in the adult, is also common in the older child (55 per cent) but less so in the younger (37 per cent). In the entire group of 75 children, fever (100 per cent), headache (49 per cent) and abdominal pain (44 per cent) constitute the triad of early symptoms. Halpern[11] found the same triad in a study of 67 cases on the pediatric ward of Cook County Hospital.

It will be noted that nosebleed (13 per cent) and constipation (9 per cent) are considerably less frequent among these children than among adults, where their incidence, as given by Osler[9] is 21.5 per cent and 16.6 per cent respectively. Abdominal pain, however, is less frequent in the adult (29.5 per cent) than in our series.

NERVOUS SYMPTOMS

Throughout the period of childhood the nervous symptoms of typhoid fever overshadow the gastro-intestinal symptoms. We have seen that headache is one of the most frequent early symptoms. Various degrees of restlessness or delirium are common, in our series more so than drowsiness or stupor. The typical "typhoid state" of muttering delirium or stupor,

TABLE II.

NERVOUS SYMPTOMS

| | Under 5 years | | Over 5 years | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Total Cases | 24 | | 51 | | 75 | |
| Headache | 9 | 37 | 28 | 55 | 37 | 45 |
| Restless Delirium | 5 | 21 | 8 | 16 | 13 | 17 |
| Drowsy Stupor | 5 | 21 | 7 | 14 | 12 | 16 |
| Meningismus | 1 | 4 | 1 | 2 | 2 | 2.7 |
| Convulsions | 1 | 4 | 0 | 0 | 1 | 1.3 |
| Total with Nerv. Symptoms | 18 | 75 | 34 | 67 | 52 | 69 |

Note the high incidence of nervous symptoms under 5 years.

characteristic of the disease in the adult, is encountered less frequently in the child and rarely in the very young. Two of the negro children, 5 and 12 years of age and in the second and third week of illness, respectively, presented definite meningismus, relieved by spinal drainage and forced fluids. In each instance, the onset of the disease had been rapid, with high fever. Reference to Table II shows that the nervous symptoms were relatively more frequent in the younger group of children (75 per cent) than in the older (67 per cent).

### GENERAL COURSE OF THE DISEASE

Griffith[5] stated from his study of 75 cases in children under 2½ years, that the disease is distinguished in early life by (1) indefinite onset, (2) a predominance of nervous symptoms over the intestinal, (3) shorter duration and milder disease. Feer[12] stressed the mildness of typhoid fever during the first two years, with frequency of abortive forms which are not recognized unless other cases arise. He states that, generally speaking, a picture of benign, febrile infection is presented, with the general well being but slightly disturbed even when the temperature is high. In our hospital series, the attacks averaged 4 weeks in length for the children under 5 years, with extremes of 2 and 7 weeks, while in the older group the average was 5.2 weeks, with extremes of 2 and 14 weeks.

Even in the early years, however, the disease may manifest itself in a severe form, as shown by two children of 5 years who had hemorrhages, one of which proved fatal, and a third child of the same age who had perforation of an ulcer resulting in a fatal peritonitis. The total mortality in our series was 10.6 per cent.

### FEVER

The sustained plateau was seldom observed in the younger children, the temperature curve showing irregularities and a wider range of daily oscillations. The average elevation during the second and third weeks of the disease was 102.6° F., considerably lower than the adult average of 103.4° F. After passing the fastigium, the temperature may fall rapidly or slowly, and extreme daily oscillations from sub-normal temperature to 102° or 103° are frequent. Also rather characteristic of the fever in children is the presence of subnormal temperature during the first week or ten days of convalescence. Relapses occurred in 5 cases (6.7 per cent), about the average incidence.

### OTHER PHYSICAL FINDINGS

The children of this series were entered at an average of 11 days after onset of the disease, when the findings should be well developed. Table III shows that palpable spleen was the most frequent abnormality, being reported in 61 per cent of the cases. Russow[13] gave a higher figure, 85 per cent in 1034 children, while Osler[9] reported 71.6 per cent of 1500 adults with typhoid had palpable spleens.

The presence of a coated or mildly furred tongue, with red edge and a red triangle at the tip, called Marfan's tongue sign by Europeans,[14] was observed in half of our cases. Neglected children had brown coated tongues, sordes of the lips and distressing oral hygiene.

Abdominal tenderness and abdominal distention were about equally present in the two groups, noted in 37 per cent of the cases. Tenderness may be localized to any part of the abdomen, but if abdominal pain is present, most young children localize it in the region of the umbilicus.

Bronchitis was present in 25 per cent of the children. Other types of respiratory involvement offered frequent complications, with otitis media occurring 4 times, pneumonia twice and lung abscess twice, fatal in both instances.

Rose spots on the skin proved quite uncommon in our cases. The difficulty of recognizing the eruption in colored children is obvious, but even in the white children only a few had any eruptions or history of such before entrance. As this phenomenon occurs early in

children, it is possible that mild eruptions escaped the attention of the parents and had faded before their entry. Morse[15] reported their frequency as 60 per cent and Henoch[16] found eruptions in 362 of 381 children.

### THE PULSE RATE

Bradycardia and dicrotic pulse, known the world over as diagnostic features in typhoid fever, are unreliable in the infant and young child. It will be seen that the children under 5 years of age had pulse rates ranging from 100 to 160, with an average of 129 at the time that the temperature averaged 102.5° F. The older children, especially at 10 to 12 years, may exhibit bradycardia. In our series the pulse rate of the older group varied from 80 to 150, with an average of 114. The pulse is usually strong and circulatory failure in children is uncommon.

TABLE III.
PHYSICAL FINDINGS, TYPHOID FEVER

| | Under 5 years | | Over 5 years | | Total | |
|---|---|---|---|---|---|---|
| | No. | % | No. | % | No. | % |
| Total Cases | 24 | | 51 | | 75 | |
| Palpable Spleen | 14 | 58 | 32 | 63 | 46 | 61 |
| Red Tongue | 12 | 50 | 26 | 51 | 38 | 51 |
| Abd. Tenderness and Distention | 8 | 33 | 20 | 39 | 28 | 37 |
| Bronchitis | 8 | 33 | 11 | 21 | 19 | 25 |
| Pulse Rate* | 100-160 | | 80-150 | | | |
| Average | 129 | | 114 | | | |
| Temperature* | 99-106 | | 99-106 | | | |
| Average | 102.5 | | 102.6 | | | |

*Cases with complications excluded.

**Enlarged spleen and reddened tongue are the usual findings. Note the absence of bradycardia in children under 5 years.**

### LABORATORY DIAGNOSIS: THE BLOOD COUNT

Leukopenia, one of the cardinal findings in the adult, is the unusual picture in the child under 5 years, and even a relative leukopenia may be lacking. In 18 uncomplicated cases under 5 years of age, 8 had leukocyte counts over 10,000, as compared with 5 whose counts were under 6,000; the range of counts was from 4,500 to 19,600 and the average was over 9,000 per cu. mm. The older children had counts nearer the adult type, with an average of 7,160 cells per cu. mm.

TABLE IV
LEUKOCYTE COUNT IN TYPHOID FEVER
—Uncomplicated—

| | Under 5 years | Over 5 years |
|---|---|---|
| Total Cases | 18 | 41 |
| Counts over 10,000 | 8 | 7 |
| Counts under 6,000 | 5 | 14 |
| Highest Count | 19,600 | 13,000 |
| Lowest Count | 4,500 | 2,700 |
| Average Count | 9,070 | 7,160 |
| Differential Count | | |
| Average Neutrophiles | 67% | 64% |
| Average Lymphocytes | 28% | 31% |
| Average Monocytes | 4% | 4.4% |

**Note the preponderence of high counts with absence of actual leukopenia in the younger group. No explanation is afforded for the relative neutrophilia.**

No explanation can be given for the relative neutrophilia in our series, since a lymphocyte predominance is usual in childhood cases of typhoid, but it emphasizes the unreliability of the routine blood count in the diagnosis of typhoid fever in the very young child.

### THE WIDAL REACTION

Our percentage of positive agglutinations (68 per cent) is a little lower than usual. Denison[17] found 75 per cent and 90 per cent positive in the second and third week, respectively, and others (8, 18,5) report even higher percentages. The value of the Widal has been reduced, especially in lower dilutions, by the widespread typhoid vaccine administration and by the reports of Rosher and Fielder[19] in England and Havens[20] in the South, that 23 to 29 per cent of supposedly normal persons yield positive typhoid agglutinations, in dilutions of 1:40 to 1:320.

TABLE V.
LABORATORY FINDINGS, TYPHOID FEVER

| | Pos. | Neg. | % Pos. |
|---|---|---|---|
| Widals, Total | 46 | 21 | 68 |
| Widals, 2nd week | 16 | 13 | 55 |
| Widals, 3rd week | 17 | 7 | 71 |
| Widals, 4th week | 13 | 1 | 93 |
| Blood Cultures, Total | 13 | 19 | 41 |
| Blood Cultures, 2nd week | 5 | 3 | 62 |
| Blood Cultures, 3rd week | 5 | 8 | 38 |
| Blood Cultures, 4th week | 3 | 8 | 27 |
| Stool Cultures, Total | 13 | 24 | 35 |
| Stool Cultures, 2nd week | 2 | 7 | 22 |
| Stool Cultures, 3rd week | 1 | 8 | 11 |
| Stool Cultures, 4th week | 10 | 9 | 52 |

**The percentage of positive Widals during the second and third week is slightly low. Only those stool cultures taken for diagnostic purpose during the course of the disease are included.**

### BLOOD CULTURES

There were 13 positive blood cultures (41 per cent) of a total of 32 in our series. In the early stages of the disease, blood cultures are valuable, and every effort should be made to secure them, despite the difficulties in young children.

### STOOL CULTURES

In infancy, stool cultures are particularly valuable in differentiating typhoid from the various diarrheas. I have included in the tabulation only those stool cultures taken for diagnosis during the course of the disease, totaling 37, with 13 (35 per cent) positive, omitting those taken to establish freedom from typhoid bacilli before discharge from the hospital.

### DIFFERENTIAL DIAGNOSIS

When the symptoms and physical findings are atypical, and especially in the younger children whose symptomology has been shown to be so variable, it may be difficult to establish a diagnosis. Those cases which begin with vomiting, diarrhea and fever, especially if they occur in early summer, simulate ileocolitis. Usually, however, the diarrhea is less intense in typhoid fever, mucus and blood are less common, and splenic enlargement may indicate typhoid fever.

Cases with intense nervous symptoms may simulate meningitis or encephalitis, necessitating spinal puncture and study of the fluid. It must be remembered that the typhoid bacillus can cause acute meningitis.

As illustrated in our series, the symptoms of typhoid fever in children are often masked by concurrent acute respiratory infections. Symptomless otitis media and rarely a "hidden mastoid" infection, especially if associated with intestinal disturbances, may simulate typhoid fever in infants.

Those cases with fever as the chief symptom must be distinguished from sepsis, pyelitis, miliary tuberculosis and malaria. We have encountered much difficulty in young children in differentiating malaria from typhoid fever, especially since chills and remissions of fever may be absent in malaria infections of infants and young children. Careful laboratory work and therapeutic trial with quinine are often necessary before one can be sure of a diagnosis.

### CONCLUSIONS

1. A study of 75 cases of typhoid fever in children evidences manifestations quite different from the adult type.

2. Sudden onset is the rule in young children; the most frequent early symptoms are fever, headache and abdominal pain.

3. The disease usually follows one of these courses:

   (a) Mild disease of short duration and variable symptoms,

   (b) More severe attack with predominant nervous symptoms,

   (c) Occasional severe gastrointestinal upset.

4. Palpable spleen, red tipped tongue and abdominal tenderness or distention were the predominant physical findings. Bradycardia and dicrotic pulse were seldom observed in younger children.

5. Leukopenia is unusual in the child under 5 years.

6. An attitude of suspicion toward all fevers and alert clinical study are necessary for the diagnosis of typhoid fever in the young child.

Appreciation is expressed to Dr. W. B. Worley for permitting study of cases on his service and to the hospital internes and laboratory staff who have assisted in this study.

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### DISCUSSION

**Dr. Webb, (closing): I appreciate very much the kindness of various members who have discussed this paper.**

**With regard to the incidence of small epidemics of typhoid fever and group infection within families as mentioned by Doctor Signorelli, quite a few of the infants and younger children in the present series came from families where other members**

were infected with typhoid. We saw the larger number of these cases during 1932 at which time the incidence of typhoid in this section of the country was considerably increased. It is certainly true that when cases of typhoid are present in a family all infants and younger children who have fever or diarrhea must be suspected until proven free of the disease.

The explanation offered by Doctor Strong for relative protection of infants under six months of age from typhoid fever as well as other diseases because of placental transmission of protective anti-bodies has seemingly been thoroughly proven. Protection is present, however, only in case the mother has previously had the disease in question.

The importance of stressing protection of infants and children from typhoid fever by use of the vaccine has been properly stressed by Doctor Bloom and others who discussed the paper.

It must be remembered, however, that protection is only relative and the parents should be told that absolute protection cannot be promised. In the present series quite a few of the children had been given typhoid vaccine within a year previous to onset of the disease, proving that absolute protection is not assured.

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## A SIMPLIFIED TREATMENT OF INFANTILE DIARRHEA*

ELEANOR COOK, M. D.
LAKE CHARLES, LA.

The frequency of a rather severe form of diarrhea which has been termed by many of us "intestinal flu", and its ready response to dietary treatment has prompted me to take your time with this very elementary paper.

The same principle applied in the treatment of this form of diarrhea can also be successfully applied in others.

In the type of intestinal upset, which for lack of a better term I shall label intestinal flu, I have found the patients usually have fever, vomiting or nausea, and frequent loose foul smelling stools. There may or may not be some upper respiratory symptoms. Sometimes there is subnormal temperature throughout the course of the diarrhea and sometimes the temperature goes as high as 105° or 106° F. If the case is seen late there is often blood in the stools, and in the case of young infants, often a rather severe dehydration.

A history often discloses a contact with a similar case. The organism does not appear to me to be milk borne or water borne, as babies on boiled milk and boiled water frequently acquire this trouble, in families where the adults have what is diagnosed as "intestinal flu".

Since no free hospital and laboratory service was available for research work, I have made no attempt to try to isolate the causative organism but merely to determine in what media the organism grows best, and in what media its growth could be controlled. Assuming that the organisms are in the intestinal walls, and therefore that the patient would not necessarily be freed of them by a purgative, I do not consider a preliminary purge essential to the treatment. It is, I think, effective, though, in ridding the intestinal tract of the type of food on which the organism is growing. I advise therefore giving an initial dose of castor oil when it can be retained and where it is not contra-indicated by severe irritation of the intestines as shown by blood in the stools.

It can be safely assumed that alkaline stools, which I have invariably found in these cases, will be aggravated by a protein diet. I therefore have found that a diet of orange juice and barley water for about 48 hours is followed immediately by decided improvement. (This is supplemented in a few days by cereals and toast, milk being put back gradually in the diet.) This has, of course, to be supplemented at times by drugs for the relief of tenesmus and nausea, and by enemeta as indicated.

The respiratory symptoms when present have to be treated. I have not found any of these cases complicated by otitis media.

The point I wish to make is this: The reaction of stools in diarrhea gives the indication for the treatment, and the simple litmus paper test can so easily be made, not only by the physician, but by the nurse or other attendant. It is an accepted procedure in urinary infections, but is not, I think, sufficiently used and appreciated in the diagnosis and treatment of intestinal infections; and too often patients with alkaline stools are put routinely on a skimmed milk diet, sometimes with very alarming and disastrous consequences.

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*Read before the Louisiana State Medical Society, Shreveport, April 10-12, 1934.

I have found a non-protein diet very effective, also in diarrhea of typhoid in which the stools are alkaline, and in the diarrhea from improper food where the stools are alkiline.

In regard to conditions with loose acid stools, there is usually a very ready response to an easily assimilated protein diet with plenty of fluids, after a preliminary cleansing of the intestinal tract with castor oil.

I think a liberal supplv of litmus paper in the physician's bag wil help materially in the diagnosis of intestinal conditions and in indicating a very simple and effective treatment.

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## TREATMENT OF ACUTE AND SUB-ACUTE INFECTION OF THE PELVIS WITH SPECIAL REFERENCE TO THE ELLIOTT TREATMENT*

JOHN T. SANDERS, M. D.†

THOMAS BENTON SELLERS, M. D.†
NEW ORLEANS

Conservatism is now an accepted principle in the treatment of acute and subacute infection of the pelvis. The treatment is entirely medical with the exception of surgical drainage of an abscess through the vagina.

From a study of 1021 cases of pelvic infection admitted to the Woman's Hospital Clinic in New York City, Aldridge[1] formed these conclusions:

"1. Adnexal disease tends to heal spontaneously. There is no means of knowing which cases will heal and which may need operation. All cases should, therefore, have the benefit of conscientious palliative treatment before operation is considered.

2. In the series of 1021 attacks, 48 per cent healed completely or became symptom free; 32.7 per cent persisted after treatment, with symptoms and palpable pathology. 19.1 per cent were not examined after discharge from the hospital."

Heretofore, the conservative treatment of acute and subacute infection of the pelvis consisted of palliative and supportive measures such as rest, attention to elimination, posture, diet, tonics, fresh air, ice bags, vaginal tampons and vaginal douches. Tampons and douches are not used in acute conditions, but only in subacute conditions. Among the more recent methods of treatment may be added vaccines, injections of non-specific proteins and diathermy. All of the aforementioned methods of treatment, with the aid of sufficient time, accomplished favorable results. At present, ice bags are being discarded in favor of heat in the treatment of acute and subacute pelvic inflammation.

Heat is probably the oldest therapeutic agent known. The sun furnished it before man devised other means of producing it. Hot poultices, heated stones, hot water bottles, electric pads, heat tents, infra-red lamps, high frequency current machines, fever produced by inoculation with malaria plasmodia, and other agents all demonstrate the value of heat in the treatment of disease.

Various methods of applying heat to the pelvic organs have been used. As early as 450 B. C. Hippocrates prescribed the vaginal douche for the relief of pelvic pain. German physicians used heated shot poured into the vagina to maintain prolonged heat and to cause greater distention than could be obtained by hot water[6]. The benefit obtained from ordinary hot vaginal douching is limited because it is difficult to administer treatment long enough and hot enough. Medical diathermy in pelvic inflammation is of value, as pointhed out by Gellhorn[3] and others; we have obtained good results by its use. It requires, however, an expensive apparatus, experience, and an understanding of physics. Also, the question of sufficient elevation of temperature in the deep tissues and the limited area so heated are to be taken into consideration.

Gellhorn[4], about 1923, found that the vaginal mucosa would tolerate water at a temperature of 120 degrees Farenheit without injury. The vulva and skin, however, will not stand such high temperature without burns. Vaseline was applied to these areas for protection. At about the same time, Dr. Charles Robert Elliott found that the vaginal mucosa can tolerate temperatures of 130 to 135 degrees Farenheit without injury. Desiring to treat pelvic infection with prolonged

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*Read before the Orleans Parish Medical Society, May 14, 1934.

†From the Departments of Obstetrics and Gynecology, Southern Baptist Hospital and Tulane University, New Orleans.

constant temperature, he devised an apparatus which is compact and portable. It heats the water, controls the temperature automatically and maintains the desired pressure in the gum rubber bag which is placed in the vagina. The vaginal applicator is evenly distensible, fits the vaginal cavity and partly encircles the cervix. The water circulates from the machine through an out-flow tube and returns through an in-flow tube. The treatment is begun at a temperature of 115 degrees Farenheit and the heat is automatically raised at the rate of three-fourths of a degree per minute until 130 degrees Farenheit is reached. This temperature is maintained until the treatment is completed, usually from forty-five minutes to one hour. The pressure in the applicator varies from one to four pounds and is regulated so as to cause no discomfort. At the end of the treatment, a bivalve speculum is placed in the vagina and the discharge removed with cotton held by uterine dressing forceps. A tampon of boroglycerine is left in the vagina for from four to six hours. Care must be taken in introducing the speculum and in removing the discharge not to denude the epithelium which might easily be done just after a treatment.

The Elliott treatment is very effective in acute and subacute salpingitis, pelvic cellulitis, pelvic abscess, pelvic peritonitis, gonorrheal vaginitis and endometritis, and in postpartal and postabortal infections. It is also of great value in chronic pelvic infections. Counseller[2] has found that as a postoperative measure it " . . . stimulates rapid absorption of exudate, shortens convalescence, reduces morbidity and thereby contributes much to a successful surgical result."

The physiological effects of the Elliott treatment[5] are:

"1. The production of a marked hyperemia in the pelvis.

2. An average increase of 17 per cent in the leukocyte count of 87 per cent of the patients treated. (Graham's series).

3. A local elevation of temperature in the vagina, uterus, rectum, bladder and pelvic peritoneal cavity of from 5 to 7 degrees.

4. The production of a profuse discharge from the cervix and vagina."

Following the effects enumerated above, there results (5):

"1. A prompt subsidence of congestion and inflammation.

2. A resorption of exudate.

3. A definite destruction of bacteria.

4. An out-pouring of mucus and washing away of infective organisms from the cervix and vagina."

As has been pointed out above, in all earlier methods of treatment the time element was of great importance. That element is a negligible factor when the Elliott treatment is used. Although the treatment can be given in the home, hospitalization is perferable to accomplish the best results. Holden and Gurnee have been able to compile a table showing the difference in time required for earlier treatment and for the Elliott treatment.

Holden and Gurnee (6)

Average Number of Days in Hospital

| Type of Pathology | Former Treatment | Elliott Treatment |
|---|---|---|
| Acute salpingitis | 27.2 | 13.2 |
| Chronic salpingitis | 24.3 | 10.8 |
| Pelvic cellulitis | 41.0 | 14.2 |
| Pelvic abscess | 31.8 | 19.1 |

| | Former Treatment Bellevue 1926-27 Before and During Treatment | Bellevue 1929-30 From First Treatment until discharge—Bellevue 1929-30 | |
|---|---|---|---|
| Acute salpingitis | 27.2 | 21.3 | 13.2 |
| Chronic salpingitis | 24.3 | 19.4 | 10.8 |
| Pelvic cellulitis | 41.0 | 27.1 | 14.2 |
| Pelvic abscess | 31.8 | 29.9 | 19.1 |

We have been using this method of treatment in private practice since November, 1932, with very gratifying results. During this eighteen months we have used the treatment in practically every acute gynecological condition and our results bear out the findings of the observers quoted in this paper.

SUMMARY

We have found that the Elliott treatment will help to cure a large number of cases of acute and subacute pelvic inflammation without operation, pain or danger. The time required for treatment is considerably shortened and the expense to the patient is only moderate.

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DISCUSSION

Dr. Nathan Polmer: Verily, it has been said, "There is nothing new under the sun!" Two thousand years ago, Hippocrates recommended hot vaginal douches for gynecological conditions. Then with the advent of Arabian medicine, when physicians were prohibited to examine or treat female pelvic organs, this had fallen into disuse. After a period of ice bags, pelvic pathology was treated by hot packs, hot stupes, hot applications, hot douches, diathermy, and recently by heat as in the Elliott treatment.

I have had occasion to use the Elliott apparatus for the past couple of weeks and am fairly well pleased to state it does produce heat. Holden and Gurnee are very favorable about its use. I am not sure whether this form of heat is superior to diathermy. In diathermy, we get heat by the conversion of electricity into heat on account of the resistance of the tissue. In the Elliott apparatus, we get heat by radiation.

It has been shown that after eighteen of these Elliott treaments, a positive gonorrhea cervical smear becomes negative, and after twenty, an urethral smear has been negative on five successive tests.

Dr. Sanders, (closing): I may say that the Elliott treatment regulator, like any other machine, requires watching by a competent attendant who is thoroughly familiar with the technic of treatment. Rather severe burns have been reported in several cases, but I have had no such experience. Scar tissue does not tolerate a high degree of heat, a fact which must be borne in mind in treating patients who have had plastic operations.

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# APPENDICITIS DURING PREGNANCY*

J. P. CULPEPPER, JR., M.D.
HATTIESBURG, MISS.

The question of appendicitis during pregnancy brings to the general surgeon, the gynecologist and the obstretrician one of the most interesting, and at times, one of the most baffling of all problems they are called on to deal with.

*Read before the Section on Surgery at the Sixty-Seventh Annual Session of the Mississippi State Medical Association, Natchez, May 8, 1934.

In spite of this fact, this question seems to have created but slight interest in this country until recent years, since over two-thirds of the articles and reports in the literature are from foreign countries.

In 1894, Munde described the first case of appendicitis during pregnancy that terminated successfully following operation. In 1897, Abrams reported 15 cases from the literature and a few years later Boige, in 1901, reported 70. Since that time there have been numerous very able reviews reported in the literature from this country and abroad. In fact, there is no longer any excuse for reporting the single case, unless it is very extraordinary, or in fact, the small series of cases for statistical purposes, for there are several large series in the literature during the last few years, from which more accurate conclusions can be drawn.

The writer was prompted in bringing this paper before this body by his experiences in the last few years of encountering a number of cases of appendicitis during pregnancy from the very early stage where the pregnancy was not diagnosed before operation to one case that occurred during the last trimester where the problem was truly complicated and the decision with reference to operation was made under the most trying circumstances.

## SYMPTOMS AND DIFFERENTIAL DIAGNOSIS

As a rule the diagnosis of appendicitis during the first three months of pregnancy does not differ from that in the non-pregnant state. I will not say that the diagnosis of appendicitis in a woman, whether the patient be pregnant or not, is always easy, for that is far from my experience. A few years ago Dr. C. Jeff Miller made a very careful study of 239 fatal cases of acute appendicitis occurring in two of the New Orleans hospitals; less than one-half of these cases presented the old triad of cardinal symptoms that we have been taught for years—namely, pain, nausea and vomiting and localized tenderness. If this be true in the non-pregnant state, it is very easy to imagine how pregnancy may complicate the picture: the problem becomes increasingly difficult as term approaches, until, during labor, it is practically impossible to make a diagnosis.

In attempting to make a diagnosis every

diagnostic aid should be brought to bear, and just here I would like to stress the importance of a careful history. From the study of large series of cases reported in the literature one point is outstanding—that there is nearly always a history of previous attacks, either mild or severe. Primary appendicitis during pregnancy is relatively rare but it is a recognized fact that pregnancy will often cause a flare-up in an old chronically infected appendix. In numerous cases reported where the diagnosis was most difficult and complicated, this fact alone from the history was the deciding point in favor of a life-saving operation.

Another fact to be born in mind in arriving at a correct diagnosis is that there is considerable displacement of the appendix as pregnancy advances. The greater majority of cases of acute appendicitis are encountered during the third and fourth months, according to Heineck and others. It is at this time that the appendix is transferred from a pelvic to an abnormal structure. Schumaker reports a series of seventy women studied by the roentgen ray from the second month to the end of pregnancy in which this fact is definitely proven.

In arriving at a diagnosis of acute appendicitis during pregnancy the following are some of the conditions to be considered and ruled out: 1. Gall bladder disease; 2. Right sided ectopic pregnancy; 3. Pyelitis on the right side; 4. Renal colic on right side; 5. Ovarian cyst with twisted pedicle; 6. Intestinal obstruction; 7. Diverticulitis; 8. Mesenteric thrombosis.

Because of the lack of time, these conditions will not be discussed individually. The confusion of this condition with the ectopic pregnancy or an ovarian tumor with a twisted pedicle is of little moment, for both conditions are surgical and demand immediate operative treatment. One of the most confusing conditions to differentiate at times, is a right-sided pyelitis. We know that a right-sided pyelitis is much more frequent in the pregnant state than pyelitis on the left side, due to the position assumed by the gravid uterus in the majority of cases. Polack has very aptly pointed out, however, that the sequence of events in appendicitis and pyelitis is not the same as a rule. In appendicitis, it is usually pain, later fever and rarely chills, while in pyelitis it is chills, fever and then pain in the typical cases.

There is considerable discussion in the literature with reference to the value of the leukocyte count in appendicitis during pregnancy; the pregnant state usually gives a leukocytosis of from ten to twelve or thirteen thousand which is considered physiologic. The following is quoted from a most excellent article by Dr. Urban Maes published recently on this subject: "The laboratory is not very helpful. I am inclined to question its usefulness even in the non-pregnant state, although I employ it, of course, with ritualistic care, and it is even less useful during pregnancy, when leukocytosis is physiologic; any white cell count under twelve thousand is not likely to be of much diagnostic value, although the increase in polymorphonuclear cells may be significant in connection with other data. In our own series (50 cases) only 4 cases exhibited a white cell count over 12,000, the extreme being 18,500. The patient who died had a leukocytosis of 12,500 with a polymorphnuclear count of 79 per cent."

### PROGNOSIS

A careful perusal of the literature is very interesting and instructive so far as the prognosis of this condition is concerned, for it is generally conceded that other factors being equal, the morbidity is more varied and the mortality higher in the pregnant than in the non-pregnant state. As Babler so aptly states, "the mortality of appendicitis during pregnancy is the mortality of delay".

The mortality at any period of pregnancy is practically the same as that in the non-pregnant state, provided the operation is done before the appendix has ruptured or become gangrenous, but once perforation has taken place it is in the neighborhood of 40 per cent for the first six months, and from 70 to 80 per cent in the last three months. Schmidt reported 486 perforated cases of all stages of pregnancy where the mortality rate was 50 per cent. This gives a very vivid conception of the extreme seriousness of this condition. The prognosis is always worse where abortion or miscarriage takes place, and of course this happens most frequently where drainage is necessary.

### TREATMENT

Appendicitis complicating pregnancy is, after all, still appendicitis and we have but one treatment and that is early operation. The late John B. Murphy was perhaps the most ardent advocator of operative procedure in appendicitis that the country has ever had; he was just as positive that early operation was the method of choice in dealing with appendicitis complicating pregnancy as with appendicitis at any other time.

Early operation of acute appendicitis complicating pregnancy cannot be stressed too much, for if the appendix is removed and the abdomen can be closed without drainage our problem is simpler than it is if drainage is necessary. The incidence of abortion or miscarriage is much less and this gives a more favorable prognosis. On the other hand appendicitis here is after all appendicitis, and if pus is found, it is imperative to drain. If pus is encountered during the early months of pregnancy and it is necessary to drain the abdomen, the foetus can sometimes be saved by the very liberal use of opiates, which should always be a practice in these cases. The problem is greatly complicated if pus is found in a pregnancy near term, and it is here that DeLee, DaCosta, Wilson and many others think of cesarean section together with appendectomy, or drainage without removal of the appendix, as is sometimes necessary. Some authorities think that it is advisable to do the Porro operation if frank pus is encountered during the last months of pregnancy, but this seems truly radical and very dangerous.

### CONCLUSIONS

1. Primary appendicitis is rather rare during pregnancy but secondary attacks are quite frequent.

2. Pregnancy exerts an unfavorable influence on a diseased appendix due to pressure, pulling on old adhesions and the increased tendency towards constipation.

3. About 80 per cent of the cases occur in the first six months of pregnancy, the disease being comparatively rare in the last dimester.

4. The diagnosis becomes increasingly difficult after the first six months, this being especially true if uterine contractions are present.

5. In non-suppurative cases during the first six months the outlook for both mother and child is good; the mortality increases in direct proportion to duration in months of pregnancy and the duration in hours of the acute attack.

6. Abortion or miscarriage definitely increases the risk to the mother, but these so often result from the pathology present rather than the operation to relieve the condition.

7. Too much dependence cannot be placed on a low blood count, a slight degree of temperature, or a lack of muscular rigidity, for these may often give a false sense of security.

8. Early operation is the greatest factor in lowering the mortality, and this should be done on the basis of recognized surgical principles.

### DISCUSSION

**Dr. J. M. T. Finney, (Baltimore, Md.:) I have greatly enjoyed listening to Dr. Culpepper's most interesting paper. I think the doctor has pretty well covered the salient points in the question under discussion.**

**Appendicitis, whether in a pregnant woman or elsewhere, is appendicitis, and should always be treated as such. Personally I have never met with a case of appendicitis in a woman pregnant beyond six months, though I have seen quite a number in the earlier stages of pregnancy. All of them, whether operated upon or not, have gone on to full term. In no case was operation followed by abortion.**

**I expect to say something about appendicitis in my paper scheduled for this evening, so I will not anticipiate what I expect to say then.**

**I take pleasure in expresing my full agreement with every point made by the essayist in his paper.**

**Dr. John Darrington, (Yazoo City): It is fine to have a few friends and especially to have one friend who after listening to me for thirty years is still willing to call on me to talk again. I will say this, he is a bear for punishment. It is not a good idea of my getting up here to talk after that excellent paper, and after Dr. Finney has given you the last word on the subject. I think, however, the gist of the whole matter is that appendicitis in pregnancy should be operated on early and the trouble we have is we are not able to make a diagnosis quick enough. We hum and haw about it, and don't know whether it is an infected tube or stricture of the ureter or pus in the kidney, or something else and by the time you have made all your laboratory tests your time has slipped by and your golden opportunity has passed, so I would rather have more information on how to make an early diagnosis. After diagnosis is positively made, I know exactly what to do—that is easy—so I think it would be well worth while for**

members of this Association with the welfare of the patient at heart, to exert every effort in determining the exact cause of pelvic pain in the pregnant woman, and when we have done that if we are able to make this diagnosis early, and if it is early enough I feel that it is not much more serious than an appendicitis in a non-pregnant woman.

I heard Murphy say once, and we always looked on Murphy as a great teacher, I heard him say when you are doing any abdominal work, if you will just keep your hands off the uterus you will not be likely to have an abortion. Of course in removing a retrocaecal appendix, I don't know how you could go down in there and get at it without doing a little pushing on the uterus. However, you might do as John B. frequently did; he went in from the back and got it out. He didn't bother anything in the front; he said if it was a drainage case the pus would run down hill; he said he would let his pus run south instead of north. I want to extend to the audience my great appreciation for calling on me to say something that probably wasn't worth hearing.

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## THE RATIONAL TREATMENT OF DIABETES MELLITUS*

UPTON GILES, M.D.
NEW ORLEANS

The treatment of diabetes mellitus, which for many years has been enveloped in a fog of metabolic theories, weights, ratios and mathemetical formulae, and which has therefore been a source of great confusion to students and the profession alike, has recently shed its bewildering cloak and can be presented as a relatively simple subject.

The changes which have brought about the development of the method of treating diabetes mellitus may be described as follows:

1. Discard of the practice of weighing the diet: During the past few years we have abandoned the practice of weighing the diets and have adopted the method of measuring the food in household quantities. The variation of the percentage composition of different specimens of the same food is so great as to make it quite inconsistent to demand that the portions of food be accurately weighed. The use of household quantities introduces a relative small error, which neutralizes that due to the variation of the composition of food stuffs at least as often as it exaggerates it (6, 11). In practice, the use of household measures has proven to be quite as efficient as weighing the diet. Also another great advantage is that it allows the patient who has become familiar with their use to have meals away from home as frequently as he wishes. He need not carry a scale with him, nor break his dietary restrictions.

2. Prescription of the full ration at the beginning of treatment: The former practice of using gradually increasing diets has been discarded not only because no advantage is to be derived therefrom but also because it renders the treatment more complicated and prolongs it so that the expense to the patient is greatly increased. The popular belief that the dosage of insulin is less when graded diets are used than when the immediate full ration is employed is based on erroneous premises. The practice of first giving the patient a maintenance diet and then increasing to the total caloric requirement when at work has been discarded for the same reason as well as because it is practically impossible to arrive at even a fair estimate of these requirements in any individual case. The total caloric requirement is arrived at by a trial and error method controlled by the body weight. There are tables and charts which tend to furnish the energy or basal caloric requirement. We have found such tables of very little usefulness. The variation among individuals of the same occupation is so great that it is impossible to make use of information derived from averages. In the South, 25 to 30 calories per Kg. has proved sufficient for the maintenance of body weight for most adult patients even at work. However, for children it is important to realize that the growing child requires an added ration to satisfy the requirements of the metabolism of growth, ie., about one half again as much nutrition is required as it does for the adult. The initial allowance for children should be about 45 calories per kilogram body weight per day. Here again, the efficient diet will be arrived at only by a period of observation; it cannot be calculated before hand. A diet on which a patient continues to loose is insufficient.

*Read before the Orleans Parish Medical Society, May 14, 1934.

A diet on which he continues to gain an undesired weight is excessive. The correct diet is the one which permanently maintains the desired weight. This is a simple rule, but apparently there is no ultra-scientific substitute for it.

3. The use of a trial and error method in arriving at the dosage of insulin: The usual procedure is to administer insulin at the rate of one unit for each two grams of sugar excreted in the urine in twenty-four hours or to calculate (22) the insulin dosage from the height of the fasting blood sugar at the rate of 2.5 units for every 10 mg. in excess of 90 mg. per 100 cc. in the belief that this is exactly the dose necessary to abolish sugar from the urine. Such a practice rests on the assumption that one unit of insulin will insure the utilization of the same quantity of glucose (2 gm.) in every case, regardless of the severity of the disease, regardless the type of diet, regardless of the distribution of the food among the three meals and regardless of all the many other factors, some unknown, which influence the relation between the sugar excretion and the dose of insulin necessary to abolish it. But it has been shown (18) that there is no simple ratio between either the amount of sugar excreted in the urine or the blood sugar concentration on the one hand, and the requirement on the other. Therefore insulin is adadministered by a trial and error method in increasing doses until the urine is sugar free and the desired level of fasting blood sugar concentration is reached. Quantitative examination of the urine for sugar is pointless and has been discarded. In its stead frequent qualitative examination of the urine is employed as suggested by Peters (18).

4. The use of high carbohydrate diet: In the past, carbohydrates in the diabetic diet has been subject to wide variations, ranging from almost complete elimination in the classical diets of Joslin and high fat diet of Newbeurgh, to an almost exclusive carbohydrate diet represented in the oatmeal and similar "diabetic cures." Our change to the higher carbohydrate diet is based on the findings of many workers (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 16, 17, 20, 22) who have reported that high carbohydrate—low fat diet requires the use of little if any more insulin than the high fat—low carbohydrate diet. There is little uniformity of opinion among those advocating the high carbohydrate diet. Some use twice as much carbohydrate as fat while others insist on three times as much. However it matters little just what proportion is used since it has been shown by Sansum, Allen and others as long as the total calories remain the same the carbohydrate allowance may vary from 30 grams to as much as 300 or 400 per day with only a slight change in the insulin requirement. Usually we employ 100 to 250 grams of carbohydrate per day, depending upon the severity of the patient. The reason for avoiding extremely high carbohydrates in the new patient is not because the insulin requirement is unduly raised, but that the blood sugar fluctuations are too marked. It seems that a more smoothly running blood sugar is achieved on the lower carbohydrate mentioned, thereby placing less strain on the pancreas. The use of these diets also eliminate the calculation of ketogenic-antiketogenic ratios and have made it possible to abandon the use of so called diabetic food substitutes for those who employ them.

## DIET

The most important constituent in diabetic therapy is diet, because it must be employed in every case. The components of the diet requiring consideration are carbohydrates, protein, fat, vitamins, minerals and finally total calories which is the most important factor and is synonymous with body weight.

*Vitamins and Minerals*: There are certain fundamental principles which apply to all diets and wherever possible none of them should be violated. Comparing the high fat—low carbohydrate diet with present day standards they appear to be deficient in many ways. There is a vitamin and mineral deficiency because of the lack of milk, fresh fruit and vegetables. Sansum states since "using the higher carbohydrate diet in the treatment of diabetes all patients have felt physically stronger and mentally more alert."

*Prescribing the diet*: The patient is weighed and given a diet whose total caloric requirement amounts to 25 calories per kilogram body weight, provided that he is neither overweight or underweight.

*Protein*: Protein has been under dispute for several years. Various investigators have claimed it is specifically toxic for diabetes, even more so than carbohydrates, and should be re-

stricted to 2/3 gram or less per kilogram of body weight. These contentions were never proved by any experimental work and may be regarded as exploded. Protein should be used liberally wherever possible, because it adds taste and variety to the diet and affords strength to the individual. One gram of protein per kilogram of body weight is furnished in this diet because it has been found sufficient to maintain nitrogen equilibrium, provided that enough calories are furnished by the carbohydrate and fat to make up the total caloric requirement. The remaining calories are divided between the carbohydrate and fat according to the taste of the patient. Ordinarily a high carbohydrate diet will be preferred. We employ from 50 to 80 grams of fat per day. With diets of 1,000 calories or less we give 50 grams of fat per day; with those of 1,000 to 1500 calories we give 50 to 60 grams of fat and with diets of between 1,500 and 2,000 calories we allow 60 to 80 grams of fat. We rarely use diets of more than 2,000 calories but when such a diet is necessary we do not exceed a limit of 275 grams of carbohydrates per day. These proportions allow the choice of a very agreeable menu by the patient. We do not believe that they must be rigidly adhered to. If the patient wishes a slightly greater proportion of fat, as a very few do, we increase its amount and reduce the carbohydrate so as not to exceed the total caloric requirement. We do not, however, allow patients to take *high* fat diets.

*Freeing the urine of sugar*: The patient is then furnished with four quart bottles labeled 1, 2, 3 and 4 respectively and directed to collect the twenty-four hour specimen in four sections as follows:

No. 1 contains all urine excreted between breakfast and lunch.

No. 2 contains all urine excreted between lunch and supper.

No. 3 contains all urine excreted between supper and bedtime.

No. 4 contains all urine excreted between bedtime and breakfast.

These specimens are collected daily and are brought to the office each morning for qualitative analysis. After several days, if the glycosuria still persists or if acetone is found in the urine, insulin must be employed. The initial trial dose of insulin depends roughly upon the results of the qualitative analysis of the specimen, but is largely a matter of guess work. If all the specimens give a red or orange reactions with the Benedict's solution we administer 20 units of insulin before breakfast and 10 units before supper. If less strong reactions are given by the specimens, the initial trial dose is 10 units before breakfast and 5 units before supper. Insulin is given one-half hour before the meal. Whatever initial trial dose is given, if the specimens continue to show sugar, as they usually do, the dose is increased. Since the most marked glycosuria usually occurs after breakfast, the morning dose of insulin must be the larger and usually it is this dose which requires the greater increase, as will be indicated by the fact that No. 1 specimen (breakfast to lunch) usually gives the strongest reaction with the Benedict's solution. In general, the daily examination of the four specimens indicates when the sugar is being excreted and therefore which dose of insulin needs to be increased if not both. It is best to increase only 5 units at a time. This trial and error method of reaching the proper dose of insulin is continued until we obtain the desired result, namely, the complete abolition of glycosuria.

Only in quite severe diabetics will it be found necessary to administer a dose of insulin before lunch. As a rule, if the No. 2 specimen (lunch to supper) contains sugar the before-breakfast dose of insulin is increased even though the No. 1 specimen (breakfast to lunch) has been sugar free, adding 5 units at a time until the No. 2 specimen (lunch to supper) is sugar-free, for in most cases glycosuria after lunch can easily be controlled by increasing the before breakfast dose of insulin.

This practice is preferable to employing a before-lunch dose. However, in severe diabetics the amount of insulin which must be administered before breakfast in order to render the No. 1 and No. 2 specimens sugar-free will have to be so large that the patient is thrown into an insulin reaction about two hours after breakfast. When this occurs the before-breakfast dose of insulin must again be decreased and the No. 2 specimen (lunch to supper) rendered sugar free by the administration of a small dose of insulin before lunch. A similar situation may arise

about specimen Nos. 3 and 4. Usually if the No. 4 specimen contains sugar the before supper dose of insulin is increased, rather than employing insulin at midnight. However, at times the before supper dose of insulin may have to be increased to such an extent, in order to render specimen No. 4 (bed-time to breakfast) sugar-free, that the patient develops an insulin reaction at about midnight. When this occurs the before supper dose must be decreased to the amount which was sufficient to render specimen No. 3 (supper to bedtime) sugar free without causing a reaction and the No. 4 specimen must be rendered sugar-free by the administration of a small dose of insulin at midnight. Midnight doses will be found necessary only very rarely.

While the patient is undergoing this process of desurgarization he is taught to administer his own insulin, to examine his urine for sugar and acetone, and to manipulate and calculate and arrange diets.

The patient is furnished with a diet list in which the household quantities of various foods and their values are presented. The details of this diet list can be obtained from Pattee's Practical Dietetics.

With the aid of these lists it is possible to teach the patient to satisfy the dietary prescription without the necessity of using a "scale". As a rule he is directed to divide the twenty-four hour ration into three equal meals although this may be varied in certain cases. However, each meal must be of the same food value every day; the patient cannot be allowed to vary the size of any of the three meals from day to day. Patients who cannot learn to calculate diets are furnished with a list of "substitutions" which they apply to the original menu given then at the beginning of treatment. In this manner they can obtain considerable variety in the diet.

When all four specimens are finally sugar-free the fasting blood sugar may be determined and if in excess of 150 mgm. in a young individual, it may be further reduced by increasing the before-supper dose of insulin. By this time the patient has learned to take care of himself in a large measure, but he is urged to continue attending the office at intervals for a period of several months, during which time it may be found that the insulin dose can be gradually reduced until finally the patient can get along on much less insulin than was required to render his urine sugar-free. Many patients learn this themselves and after disappearing for several months will return with sugar free urine though they are at this time taking one-third to one-half the dose of insulin originally prescribed. This phenomenon is unquestionably evidence of partial recovery under the influence of rigid control of glycosuria.

The patient's weight is recorded at intervals and if it is found that he is losing weight the diet must be increased. Likewise, if an undesirable gain in weight has occurred, the diet must be reduced.

## SUMMARY

A method of management of diabetic cases is presented which is simple and relatively economical, which is in accord with the accepted knowledge of the metabolic defect in diabetes, and which, above all, has been found highly efficient in practice.

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## DISCUSSION

Dr. Allan Eustis: Dr. Giles asked me to discuss this paper. There is not a great deal I can say. Allow me to reply to Dr. Watson. I just want to call Dr. Watson's attention to one thing: You state that you force carbohydrates; the value of insulin is in allowing diabetics to take carbohydrates.

I think the point Dr. Giles brought up, weights versus household measures, is a very practical one. However, I do not see any advantage in not weighing the food if the patient has time or can afford a scale. It has been my experience that if the patients are taught carefully to weigh the food, in about a month's time, they can measure fairly accurately fifty grams of string beans or mashed potatoes, or what not. I think where the patient can afford a scale he should weigh the food for the first month or two.

After all, I think it is not a question of 190 grams, but of each individual, his digestibility plays an important part. I agree with Dr. Giles, these tables put out are of no use. Because a patient weighs so much, it does not mean that he should have a certain number of calories. One man will gain on 2000 calories, and another man of the same weight will lose on this number of calories. If your patient is gaining too much in weight he is getting too many calories, and if he losing weight, he is not getting enough.

Diabetes is so simple since the advent of insulin I rarely see my diabetic patients now oftener than once or twice a year. We have gotten away from the importance of blood sugar determination. We find if the patient is sugar free over a period of a month or two, that the former high renal threshold will drop to normal.

A patient who tested sugar free with a blood sugar of 180 a month ago was admitted to the hospital for amputation of the foot by Dr. Shirley Lyons last week. Before the operation, blood sugar was 133 mgs. and this level has been maintained.

The reason perhaps, that more insulin is required before breakfast, is, I believe, that more carbohydrates are contained in this meal and the patient as a rule, has not received any insulin for over twelve hours.

Dr. D. L. Watson: Dr. Giles paper is quite interesting. However, my line of treatment for diabetes is quite different. For many years, I have been using emetine hydrochloride, intravenously, quite satisfactorily.

The method of administration is as follows: one half to one grain of emetine, intravenously, daily, until five doses have been given. After this, one dose every two or three weeks as indicated. The only unpleasantness in the use of emetine is dizziness, nausea and sometimes vomiting. The symptoms are unpleasant but last only a short time. Between the fifth and tenth dose there will occur some weakness and pain in the lower extremities. When this occurs a smaller dose at longer intervals should be given; it may be given once every two or three weeks or abandoned for a time. This symptom is unpleasant, but harmless. Beginning after the tenth dose, I give one grain of cacodylate-soda intravenously once a week until cured. There is some danger of arsenical accumulation with the use of cacodylate soda.

As suggested by Dr. Giles, I use a liberal carbohydrate diet forbidding only the sugars, but allowing the starches. The course of treatment is from one to six months. Diabetes is commonly complicated with some other serious sickness like obesity and gangrene of the foot. In fact there is no disease that has as many serious complications as diabetes. Gangrene will be cured without surgery.

In this connection, I wish to state that for many years, I have been using emetine in the same manner for various acute and chronic infectious diseases. It is especially valuable in amebic dysentery and abscess of the liver, ulcer of the stomach, gonorrheal pus tubes and pulmonary tuberculosis. In conjunction with mercury and potash, I have found it an effective and permanent cure for syphilis, either congenital or acquired, in from six months to one year. Children will tolerate one half grain of emetine intravenously without any after effects. Given with the above precautions emetine is absolutely harmless.

Dr. Hans Schroeder: Diabetes is hard enough to treat when you get the cooperation of an intelligent patient. About 5 years ago I saw a colored woman with diabetes. I sent her to the Charity clinic, but since they did not treat diabetes there, they sent her to the Touro. Here she was instructed in weighing her food, testing the urine with Benedict's solution and in the administration of insulin. As she was too poor to buy scales, insulin or Benedict's solution, she had to do without them. She tested her urine by putting the finger in it, tasting it, and if it tasted sweet, would cut down her carbohydrates. That was rational treatment, wasn't it? The hardest thing was to make her stop chewing tobacco, so as to keep the molasses out of her diet.

**Dr. Giles (Closing): Since Dr. Watson thinks the diabetic diet prescribed is such an awful diet, I wonder what he thinks of the former low carbohydrate and high fat diets and other bizarre forms of diet formerly prescribed by the leaders of our profession. The diet prescribed is practically the usual diet eaten by the average individual in this climate, in so far as containing sufficient quantity of mineral and vitamins and the correct proportion of carbohydrate, protein and fat.**

**Dr. Watson condemns the use of insulin in the treatment of diabetes and substitutes for its use, emetine. I have had no experience with emetine in the treatment of diabetes, nor have I seen any reference to it in the literature, therefore I am in no position to judge its merits in this disease. I understand Dr. Watson to state "that he entirely eliminates sugar from the diet but gives his patients all the carbohydrates they wish." Von Mehring and Minkowski definitely showed that the removal of the pancreas of normal dogs is followed by a condition definitely resembling diabetes in man. The classical experiments of Allen corroborated their work and in addition showed that diabetes is a disturbance of the total metabolism and not only a disturbance of "sugar" metabolism as apparently believed by Dr. Watson. Perhaps no more dramatic discovery in medicine has been made in the past 10 years than the discovery of insulin which can be used with success in the treatment of diabetes mellitus.**

**Replying to Dr. Eustis' statement, we realize that the necessity of employing quantitative diets in the treatment of diabetes has led to the practice of training our diabetics to accurately weigh their food so that the exact number of grams of carbohydrate, protein and fat is taken each day. However it has been shown that different samples of the same food of the same weight may vary as much as 10 per cent in the amount of least of one constituent, therefore we have abandoned weighing of diets and substituted household measurements. Of course household measurements are not just as accurate as weighed diets, but whatever small error exists is a constant one and may be disregarded in the individual case.**

**Relative to Dr. Schroeder, I must state that our patients in Charity Hospital are given diet charts of household measurements prepared by the Department of Nutrition of Charity Hospital, and are taught to calculate their own diet and test their urine for sugar with Benedicts Solution and also to test for acetone. It is only seldom that we are forced to use substitutions methods in our Charity Hospital patients. I am not aware, and I doubt that any discrimination is made in treatment at Charity Hospital between the races.**

# DIETARY AND GLANDULAR DEFICIENCIES IN EYE, EAR, NOSE AND THROAT DISEASES*

D. W. HAMRICK, M. D.
CORINTH, MISS.

In the field of medicine fads and fancies come and go. The American people are singular in that they are great believers in going all the way or none. Everything new in medicine, whether it has passed the test of thorough clinical application, or is just an announcement of some new fact that seems to point the way, is grasped by an eager and gullible public and exploited as the latest "cure all" for their ills.

The task of properly evaluating these, rests on our doctors in their respective fields, as applied to their specialties. It is with this end in view that I have selected for discussion a subject that could be almost endless in its scope, but of which the worthwhile and proved facts can easily be considered within the time allotted.

Deficiency disturbances only, will be considered. No mention will be made of a number of clinical entities related to hyper-glandular activity, and hyper-dietary indulgence.

For the sake of convenience and orderliness in discussion we shall consider them under two heads: (1) As related to the ear, nose, throat, and their adnexa. (2) As related to the eye.

The upper respiratory tree and its accessory sinuses so intimately connected, are so related that no part of it should be taken as an entity. A series of tubular passages with connecting recesses, it is lined throughout with practically the same type of epithelium, viz.: a ciliated columnar or cuboidal epithelium, a basement membrane, a loose connective tissue stroma in which is situated a lot of lymphoid cells and the same type of mucous secreting glands pouring out their secretion between the epithelial cells. The blood and nerve supply is intimately related and has a similar distribution, except in certain specialized areas. From the nasopharynx we simply have a branch-line leading from Rosenmuller's fossa into two sub-stations, the middle ear and the mastoid antrum. This in

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turn is connected by small ostia with the mastoid cells and intimately related to the jugular bulb and lateral sinus. This branch-line and its sub-stations again have the same structural characteristics except that the epithelium is for the most part cuboidal in type and the cilia are absent.

In the nose we will consider epistaxis first.

From the group of so-called blood dyscrasias we will consider two that are associated with glandular insufficiency, and often attended by nose-bleed: hemorrhagic purpura and chlorosis. Since both of these occur in young girls before the age of puberty, there is no doubt an ovarian deficiency. Many authors report striking results from the use of ovarian extracts, although this has not been our experience in a recent case of hemorrhagic purpura attended by repeated and almost continuous nose-bleed. Vicarious menstruation should also be mentioned here, although it is of relatively rare occurrence. This too, is attended oftimes by nose-bleed, and again is associated with a deficiency of ovarian hormone.

Epistaxis associated with dietary deficiencies is in the main associated with scurvy and rickets.

Of the nasal edemas not associated with inflammatory change to the extent of suppuration we will mention several. Allergic vaso-motor rhinitis, we will not consider, although in all probability deficient cacium assimilation is the dominant etiological factor. The "red septum syndrome" as discussed by Jarvis, Shea and others, is either caused by a deficiency of alkaline-ash producing foods, or an excess of acid-ash producing foods according to these authors, although I am inclined to believe from my observation of these cases, that the constipation associated with these cases is a more definite etiological factor. The nasal edema, stuffiness, and watery discharge often occurring in the pre-menstrual phase in some women is associated with an ovarian deficiency, and hypogonoidism according to some authors can cause the same thing.

Of the inflammatory processes in the nasal mucosa, accessory sinuses, naso-pharynx, eustachian tubes, middle ear, pharynx and trachea attended by infection and suppuration, occuring more often in children, there is too often a dietary factor that has prepared the ground. This is a deficiency of vitamin containing foods.

Stucky and Coffin were the pioneers in proclaiming the importance of diet in upper respiratory infections, before the discovery of vitamins. Of the so-called vitamin factors late research has shown that only four of them have any apparent effect on the upper respiratory tree. These are vitamins B, C, D, and A. Cramer found by work on experimental animals that B and C were necessary for normal growth and appetite, and in addition a deficiency of vitamin B is followed by an atrophy of lymphoid tissue throughout the body. A deficiency of fat soluble A is attended by loss of appetite, loss of weight, and an increased susceptibility to upper respiratory infections (Harris). Cody puts its another way by saying that a sufficiency of vitamin A is necessary to maintain a normal nutrition of the nasal, aural, and tracheal epithelium.

This increased susceptibility to upper respiratory infections in avitaminosis A is caused by a metaplasia of columnar, cuboidal, and transitional epithelium to a more or less squamous keratinizing type (Green & Mellanby, Wolbach & Howe). The chain of events whether it be in the nose, accessory sinuses, ear, or the trachea is first a retarded ciliary action, lymph stasis, congestion, cellular changes, and then infection and suppuration. Smith, in his work on albino rats, was able to demonstrate that a deficiency of vitamin A did not disrupt the general immunological defenses of the body, since these animals in a state of avitaminosis A were still able to produce anti-bodies, but simply caused a break in the mechanical barrier of the epithelium. Infection, according to Salter, is always present and dominates the picture. According to Cody a deficiency of vitamins D and G has little effect on the upper respiratory tree, while a deficiency of vitamin B (antineuritic) is associated with a definite nasal syndrome characterized by post-nasal discharge, an enlargement of the posterior tips of the middle turbinates with a creamy white smooth appearance.

Daniels and Dean found that established sinus trouble could not be cured by diet alone. In my limited experience this has proved to be true of all upper respiratory infections, but a diet that is rich in milk, butter, eggs, vegetables,

meats, and cod liver oil are valuable adjuncts even in adult patients.

Of the deficiency diseases affecting the inner ear, where we have a more specialized type of epithelial tissues, I will mention three symptom complexes: tinnitus, vertigo, and deafness.

Adrenal insufficiency is sometimes associated with tinnitus, characteristic in that it is synchronous with the heart-beat, occurring more often in women who tire easily, have low blood pressure, are constipated, and have scanty menses.

Gottlieb describes what he calls an aurohepatico-pancreatic-syndrome characterized by a tinnitus, progressive loss of hearing, vertigo, headache, and blurring of vision. He reports 49 cases, 42 of which had definite hepatic dysfunction as shown by improvement under catharsis and being made worse by ingestion of fats. Seventeen, in addition, had a pancreatic dysfunction. Of course the tinnitus in diabetic patients is explained as a degenerative process or sclerotic changes in the nutrient vessels of the inner ear, but whether the pathology is the same in the tinnitus of hepatic dysfunction is open to question.

Of otosclerosis the latest theories seem to be that it is genetic in origin expressing itself as a hyperostosis of what should in the normal development remain fibrous connective tissue and cartilage, affecting many parts of the otic capsule. The fact that it occurs twice as frequently in females as in males suggests a glandular defect, but this is not proved (Davenport et al). Then there is a deficiency theory which is based on avitaminosis, and the endocrine theory supported by Pollock and Stevenson. Lawrence found that 73 per cent of his cases were improved by endocrine medication. Those with thyroid deficiencies improved most, pituitary deficiencies showed less improvement, while those with ovarian deficiencies improved least. I have followed up two cases for almost five years, both in young married women in the twenties, and neither has improved under any type of treatment. Of this particularly deplorable condition, because it occurs in young subjects, my conclusion is that as yet, we have gotten nowhere in a definite way, but we are gaining new leads every day, and some day will know a lot about prophylaxis, but even then little in a curative way.

As related to the eye we shall discuss avitaminosis, thyroid, parathyroid, ovarian, pancreatic, and calcium deficiencies.

In our consideration of avitaminoses related to the eye, a deficiency of fat soluble A again predominates the picture. Let us keep in mind what has already been said as to the *modus operandi*: that a deficiency of this food factor over a long period causes a metaplasia of epithelial tissue converting columnar, cuboidal, and transitional epithelium into the squamous keratinizing type, and that the changes taking place in the eye are a part of a general process. In the eye deficiency changes may be manifested in all the tissues of ectodermal origin, viz.: conjunctiva, cornea, lens, sensory epithelium of the retina, and the pigmented epithelium of the retina. In the lacrimal apparatus and in the surface epithelium of the eye there is to be considered these cellular changes, later dominated by infection. In the deeper structures of the eye the same cellular changes are followed by a degeneration. Keeping these general principles in mind we now consider clinical entities in which avitaminosis A is certainly a factor. (1) Marginal blepharitis is oftimes due to a diet deficient in fat soluble A, and many of these cases will improve when this is supplied, and in addition may be helped by massaging the lid margins with cod liver oil ointments which are now on the market. Refractive errors should of course be carefully looked after in these cases. (2) Phlyctenular and marginal keratitis. Many of these cases in poorly nourished children, who live principally on sweets and starchy foods, clear up in a surprisingly short time when the lacking food factor is supplied in the form of cod liver or haliver oil. Pillat of Peking Medical College has just published a noteworthy paper on keratomalacia. In this report he divides his discussion into xerosis epithelialis conjunctivae, xerosis cornea, and keratomalacia. In the part of this paper relating to the eye, he describes first an annoying dryness of the eyes, scanty tear secretion, whitish spots in the region of the palpebral fissure which often spread to other parts of the conjunctiva and even the cornea. To this is added infection with corneal ulceration, iritis, etc. Nearly all these cases he

says complain of hemeralopia, or night blindness. In many of these cases degenerative changes take place in the neuro-epithelial and pigmented layers of the retina which accounts for the inability to see well at night. Levine and other authorities believe that avitaminosis is the etiological factor in retinitis pigmentosa, and has demonstrated on experimental animals that macerated extracts made from the area of rods and cones contains more vitamin A than any other tissue in the body. He explains the hereditary tendency as due to familial dietary tendencies through several generations. He reports that consanguinity which is generally thought to be a responsible factor is unfounded, since retinitis pigmentosa occurs more frequently in the Hindu than in any other race, and they forbid the intermarriage of relatives. As a curative factor in checking the ultimate blindness in these cases haliver and cod liver oil has so far had little effect. Degenerative changes in the lens from avitaminosis A may also cause cataracts.

On thyroid and parathyroid deficiencies as related to the eye I will mention only two conditions which sometimes result therefrom: premenstrual swelling of the eye-lids in women who have a thyro-ovarian deficiency, and cataracts which follow accidental parathyroidectomy in the removal of the thyroid gland.

In the diabetic patient we all have seen degenerative changes in the eye manifested by lenticular changes and changes in the retina.

Repeated vitreous hemorrhages are sometimes associated with calcium deficiencies, and some think that vernal catarrh is associated with a calcium deficiency although it is more likely allergic as to etiology. Angio-neurotic edema is also probably associated with a calcium deficiency as a result most likely of poor calcium assimilation.

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DISCUSSION

Dr. Edley H. Jones (Vicksburg): Dr. Hamrick has presented a most interesting subject in an excellent manner and is to be complimented on covering it so thoroughly in such a brief paper. In my limited time I can discuss only certain portions.

The esayist dismissed allergy with the remark that "in all probability, deficient calcium assimilation is the dominant etiological factor." It must be admitted that we know all too little of allergy, but in the light of our present knowledge it could hardly be considered a "deficiency disease." In some cases deficient calcium assimilation has been a factor but even in those cases I question it being the dominant factor and further question it being a factor in any considerable percenage of allergic cases.

The work of Jarvis and his group is worthy of more than mere mention. If they had accomplished nothing more than the focusing of the otolaryngologist's attention on the importance of diet, they would still be worthy of a niche in Medicine's Hall of Fame. In the words of Weston "we may feel fully justified in joining in the conclusion—that food is the fundamental factor concerned in the health and efficiency of an individual and is the determining factor in civilization."

Most of you know that this group is interested in bio-chemistry and you would perhaps be interested in hearing a statement of their present theory. I quote Dr. Jarvis: "As a group, we have progressed through various interpretations of mucous membrane color changes. At one time we thought an increased redness of mucous membrane indicated an acidosis and a pale mucous membrane an alkalosis. A study of the carbon dioxide combining power of blood plasma failed to substantiate this theory. We then observed that when the mucous membrane within the nose, especially that covering the anterior portion of the nasal septum showed an increased redness, eviednces of a stimulated sympathetic were present. When the same membranes showed a corresponding degree of pallor, evidence of a stimulated parasympathetic was present. We have developed what we call the red mucous membrane syndrome and the pale mucous membrane syndrome. This tug between the sympathetic and parasympathetic as reflected in mucous membrane color, Dr. Francis Blackmar has designated as the autonomic level. We as a group, find this term and concept most helpful."

They have found that this "automatic level" is influenced by foods with acid-base ash and those

with alkaline-base ash. Other therapeutic agents used in the various conditions are the free use of fluids, citric fruit juices, hydrochloric acid, soda bicarbonate and iodine.

I do not know that this group is responsible for the realization of the importance of iodine in the diet but their work has certainly emphasized it. As the essayist stated, the essential mineral salts are those of calcium, magnesium and phosphorus but unless sufficient organic iodine is present to maintain the proper balance between these salts, health will not be maintained. Bauman, Kurland and Metzker found that when goiter is produced in rabbits by cabbage feeding, there results a definite retention of calcium, phosphorus and magnesium with resultant loss of balance. When iodine is administered to cure these animals there is a restoration of balance in these elements which is brought about by an increase in the amount excreted.

Of further interest in the administration of iodine is the work of McClendon and his workers. On learning the importance of iodine, certain commercial interests fed their dairy herds inorganic iodine. Analysis of the whey revealed large amounts of iodine, but so did the urine. They definitely showed that only when organic iodine was administered did the iodine appear in the cream and as diiodotyrosine, the form in which it is believed it must be converted before being fully utilized by the human body. Those interested should refer to Weston's recent and most excellent paper "Nutritional Influences."

The essayist mentioned the work of Stucky. It is worthy of repetition to state that for years Stucky emphasized and continued to emphasize until his death, the importance of *whole* cereal grains. Recently Mellanby demonstrated that it is almost impossible to prevent tooth decay when an animal is regularly fed oatmeal and white bread. His work indicated that when the germinal and cortical portions of grains are removed, they have a decalcifying influence.

One other point that I would like to mention is the importance of insulin in non-diabetic conditions in which it is very probable that dietary, mineral or glandular deficiency plays an important part. Recently Beale presented a most excellent paper on "Newer Clinical Uses of Insulin" before The American Laryngological, Rhinological and Otological Society to which I will refer you for fuller details. I will quote three statements from his summary. "Insulin in three to five unit doses at stated intervals is of help in combatting clinical conditions resulting from a degenerative change in the vascular system. Ulceration of tissue, sclerosis of blood vessels and new growth are favorably influenced by insulin in three to five unit doses at stated intervals. Insulin in three to five unit doses often relieves edema whether due to obstruction, infection or cardio-renal disease. This suggests its usefulness in edema of the pharynx, uvula, glottis and larynx."

My experience has been nothing like as wide as Beale's, but I can testify to its beneficial, tonic effect in cases of anemia, malnutrition and general asthenia associated with some pathology in the otolaryngologic field.

The study of diet is a fascinating one and productive of great benefits to our patients and ourselves, but we must agree with the essayist that true sinus infections cannot be cured by diet alone. We must further agree with him that, all too often, dietary and glandular deficiencies are predisposing factors of no insignificant value. It is thereby inferred that proper treatment must include the correction of dietary faults and the stimulation of inactive endocrine glands and further, that we should take sufficient interest in our cases to advise proper dietary regime.

Dr. Hamrick (closing): I want to thank Dr. Jones for his discussion. He was very tolerant. I want to clear up my view on allergy. Edley jumped on me on that—I expected him to. On my allergy patients I do not try to do skin tests, preferring to send them to an allergist. This past winter, since there has been so much work done on vitamin A deficiencies, I have followed up three cases very closely. I have put them on halibut oil plus calcium and I do not know whether it is due to improvement in the general condition, but they have improved. That is the reason I made that statement. Our blood tests for calcium are so inaccurate that it is my belief we are going to find it is very closely linked up with allergy.

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# JAUNDICE ASSOCIATED WITH HYPERTHYROIDISM*

HOWARD R. MAHORNER, M. D.†
NEW ORLEANS

Jaundice as a complication and symptom of hyperthyroidism is not common. Less common is there an appreciation of the true relationship between the two. Apparently Habershon (1) in 1874 was the first to report a case in which jaundice complicated hyperthyroidism. Sutcliff (2), in 1898, reported a similar case. Both of these cases were fatal. In neither instance did the authors comment on the possible cause of the association, but reported them as unusual cases.

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†From the Department of Surgery, Tulane University School of Medicine and Mercy Hospital, New Orleans.

Eder (3), 1906, reported three cases of exophthalmic goiter in which there was jaundice and he was apparently the first to express the opinion that the association of the two may have been something more than fortuitous. It is interesting that Eder (3) believed that the seat of derangement in exophthalmic goiter was the pituitary gland. L. W. Kohn (4) in a study of the gastro-intestinal symptoms in thyroid disease reported jaundice in 11 of 111 cases of goiter with gastro-intestinal symptoms from the surgical service of John Hopkins Hospital. Five of the fifty-six cases of exopthalmic goiter in his series showed jaundice. Kerr and Rusk (5) reported a case of severe thyrotoxicosis with jaundice that terminated fatally. Crotti (6), 1922, in his well-known volume on the thyroid and thymus noted that icterus may be seen in a few cases of severe thyrotoxicosis and considered its presence a bad prognostic sign. Hertzler (7), 1929, mentions icterus as rarely associated with hyperthyroidism but considered it indicative of a bad surgical risk.

Weller (8) of Ann Arbor, studying the hepatic lesions in routine autopsies of 44 cases showing thyrotoxicosis, found chronic parenchymatous hepatitis in 50 per cent of the livers. Assmann (9), in 1931, also showed that there was damage to the liver in exophthalmic goiter. The anatomic changes, he stated, were fatty metamorphosis and, in long standing cases, cirrhosis. He showed that icterus occurred in the severe cases and that it was of grave significance. Lewis (10), 1931, reported from the Lahey clinic a study of the associated pathology of hyperthyroidism. He found at necropsy in 12 cases that suffered from hyperthyroidism only minor pathologic changes in the livers. One of the livers weighed only 960 grams which he ascribed to a cirrhosis on an alcoholic basis. Beaver and Pemberton (11), 1933, have written the most comprehensive paper so far contributed to the subject. They studied livers obtained at necropsy from cases that had exophthalmic goiter, excluding cases that may have had another factor than hyperthyroidism to damage the liver. In their study were 107 cases comprizing a period of 10 years. The average duration of the toxic symptoms in this series was 2.5 years in contradistinction to an average duration of 1.5 years for all patients registering with exophathalmic goiter at the Mayo Clinic. Fifty-six of the cases had marked and fifteen had severe hyperthyroidism. Twenty-three or 21.5 per cent of the cases showed jaundice. They divided the changes in the liver into acute and chronic. The former were fatty metamorphoses and central and focal necrosis. Chronic changes consisted of simple or of subacute atrophy or cirrhosis. Acute lesions were present in 91.5 per cent of the cases and 56.5 per cent showed focal or central necrosis. The liver weighed less than the lower limit of normal (less than 1400 grams) in 62.5 per cent of the cases. Extremes in weight were 644 grams and 2450 grams. They found a relationship between the degree and duration of thyrotoxicosis and the severity of liver damage.

The author has seen at necropsy* 3 cases in which there was severe liver damage. In one case the liver weighed only 892 grams. Obviously from this accumulated data, the liver suffers severely in hyperthyroidsm. The pathogenesis of the changes in the live are not clerly understood. Most authors believe that a toxin elaborated by the thyroid injures the liver. It has been definitely show that the glycogen content of the liver is decreased on feeding thyroid. Perhaps this in itself is in some measure responsible for the damage. In any event in severe cases of hyperthyroidism it calls for high carbohydrate feedings, if not dextrose intravenously, in the pre-operative preparation.

CASE REPORT

**The patient, a female aged forty-nine years, was first seen by me in consultation in May, 1932. An emaciated woman with prominent, staring, excitable eyes was lying in bed, restlessly moving her extremities and head.**

**The onset of her trouble was referred to an attack of osteomyelitis of the mandible three years before this. The ostemyelitis followed the extraction of a tooth and with it she had severe trouble with sequestration of a part of the mandible necessitating an osteotomy. Prior to this, she was well, fat and healthy, weighing 180 pounds. During convalescence from the osteomyelitis she became nervous and excitable. She continued to lose weight, though her appetite was good. She noticed some enlargement of the neck. Her eyes became prominent. She complained more bitterly of the hot weather and did not tolerate as much cover as the normal person. She then noticed palpitation and shortness of breath on exertion. Weak-**

*At the Mayo Clinic.

ness became progressively more pronounced, especially noticeable on going up the stairs. All of these symptoms grew more intense with some periods of abatement followed by recrudescence. Her exophthalmus became marked. She lost 90 pounds.

For three years prior to May 24, 1932, she had been taking iodine almost continuously, five to fifteen drops of Lugol's solution three times a day. She had also received digitalis. Because of weakness and the other symptoms she had been in bed the greater part of the time for two years.

Within the year prior to the first time I saw her she had had recurrent attacks of nausea and vomiting, she said almost every night. She had had no diarrhea, no abdominal pain or colic. Her hair had fallen some and had become thin and her nails had become brittle. For several months she had noticed swelling of the feet and ankles.

During the few weeks prior to May, 1932, her skin had become a muddy yellow color and the sclerae had become tinged yellow. Her son who noticed this told me it had been present a month or so.

She had had the usual childhood diseases but no other serious illnesses. Married 20 years, she had five children living and well and one miscarriage. One daughter had an enlargement of the neck and one cousin had a goiter. For two years menstruation had been irregular. Less frequent and more scanty, she would sometimes go for several months without a period and the last period was in January, 1932.

Examination showed a thin emaciated restless woman lying flat on her back in bed. Exophthalmus was marked and she fixed you with a decided stare. She performed many useless movements. Pullying the cover up, then down, flexing one knee, then the other. She was stimulated and couldn't keep still. She talked rationally, laughed freely and easily. (She could have cried just as easily, was emotionally unstable, lacked composure). Her hair was thin. Her skin was loose and moist and there was manifest loss of subcutaneous fat. The skin was muddy and slightly yellow. The yellow tinge was most easily noticed in the sclerae. She was extremely weak. Got up with difficulty and could walk only a short distance and could not even step up on a stool about a foot high. Her weight was 90 pounds. Her original weight was 180 pounds.

Temperature 99.2° Farenheit. Pulse 90. Respiration 20 per minute. Blood pressure 142 mm. of mercury systolic, 82 diastolic.

There was a marked exophthalmus, a moderate stare; positive Moebius', Stellwag's, and Von Graffe's sign. Mild pterygium was noted on each eye.

She was edentulous and wore dental plates. There was a scar on the neck in the left submaxillary region, the result of a sequestrectomy. The neck was full. The thyroid, diffusely enlarged, smooth, firm was about twice the size of a normal gland, each lobe measuring about 8 cm. by 5 cm. There was no thrill or bruit over the gland. The left border of the heart was outside the midclavicular line. The apex beat was diffuse and there a slight shock was palpable. The cardiac rate was 85 to 90 and there was an occasional extra systole. Apparently there was no fibrillation. A systolic murmur was heard over the precordium most prominent at the apex. It was not transmitted to the axilla. The abdomen was scaphoid. There was some question as to whether the edge of the liver could be felt.

There was a fine bridge tremor of the fingers. Mild exophthalmic goiter nail changes: recession of the bed of the nail and brittle nails were present. Mild pitting edema of both lower extremities extended up to the knees. The biceps and patella and Achilles tendon reflexes were slightly hyperactive Babinski's reflex was not present.

There was a healed grade II laceration of the cervix.

Moderate hemorrhoids, internal and external, were found on rectal examination.

Laryngoscopic examination showed normally functioning vocal cords.

Hemoglobin was 40 per cent. Erythrocytes 2,690,000. Leukocytes 4,400. Lymphocytes 24 per cent. Neutrophiles 75 per cent. Eosinophiles 1 per cent. Blood smears were negative for malaria.

Roentgenogram of the chest showed an enlarged heart.

Two urinalyses showed no albumen or sugar. One showed a trace of indican and an occasional pus cell. The other showed an occasional hyalin cast.

Coagulation time 2 minutes 30 seconds. Bleeding time 1 minute. Wassermann negative. Tchernogubou weakly positive. A subsequent Wassermann and precipitin test were negative. The basal metabolic rate May 27, 1932, was plus 41. The icterus index was 14.

During the pre-operative preparation at the Mercy Hospital she received a blood transfusion, 500 cc. A blood count subsequently showed 3,110,000 erythrocytes, 50 per cent hemoglobin.

A diagnosis of exophthalmic goiter with jaundice due to toxic degeneration of the liver from hyperthyroidism was made. By the time she seemed to be an acceptable risk for surgery, which was two weeks after admission, and about 3 weeks after I first saw her, she could step on a stool about a foot and a half high and had a basal metabolic rate plus 22. Even then she seemed to be a bad risk, and I considered lobectomy as a procedure of choice if her condition on the table did not warrant a more extensive procedure. She was operated on

June 7, 1932, and her condition seemed satisfactory immediately after the first lobectomy so a bilateral partial resection of the thyroid was done leaving about 1/3 of a normal sized lobe on the left and about 1/2 to 3/4 normal sized lobe on the right.

Postoperative laryngoscopic examination showed normally functioning vocal cords.

The patient had a satisfactory convalescence. She sat up after 6 days, went home on the eleventh postoperative day and at the time of dismissal from the hospital, the jaundice had abated somewhat but had not entirely disappeared. She continued to gain strength and weight slowly. In about a month the jaundice had entirely disappeared. She was less nervous. Her exophthalmus receded somewhat. In August, 1932, her menses returned and she weighed 117 pounds. This clinical improvement continued for about nine months. Within a year, she had regained the ninety pounds she lost. Now she had only occasional periods of slight nervousness, perhaps no more than the normal woman. She feels well and does her own housework. Slight exophthalmus persists. Her pulse is 76 and regular. She is composed and does not show signs of thyrotoxicosis.

## COMMENT

The liver regenerates more rapidly than any tissue in the body. If a large portion of a liver is removed in a dog (one fifth to three quarters), in a few weeks (six to eight) the organ weighs as much as it did before (12). The jaundice in this case was undoubtedly of hepatic origin due to damage from thyrotoxicosis. The fact that it disappeared in one month after thyroidectomy is more proof that it was an intrahepatic jaundice from liver damage due to thyrotoxicosis; that when the cause was removed the liver regained adequate function.

## CONCLUSIONS

1. Degenerative changes in the liver occur in thyrotoxicosis.

2. Sometimes these changes are so marked as to produce clinical jaundice and when it occurs it is a sign of grave prognosis.

3. A case is presented. The patient had severe hyperthyroidism with jaundice. The patient recovered following thyroidectomy. The jaundice disappeared within one month after the operation.

LEGEND

Figure 1. Patient one year and eight months after thyroidectomy for exophthalmic goiter with toxic degeneration of the liver and jaundice. She is now clinically well.

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DISCUSSION

Dr. Alton Ochsner: Dr. Mahorner's explanation of this severe liver damage is an interesting one. It occurs to me there might be another factor aside from the fact that the toxin elaborated in the thyroid might play a role. As we know, the thyroid gland has some influence on carbohydrate metabolism; the liver also is concerned in carbohydrate metabolism.

It has been found that marked hyperthyroidism, with a high basal metabolic rate, will so decrease the glycogen in the liver that the liver is more susceptible to toxins, either toxins ordinarily in the gastro-intestinal tract or toxins originating in the thyroid itself. It might be possible in severely damaged individuals as a result of thyrotoxicosis to prevent such liver damage preoperatively by large doses of dextrose. The individual with hyperthyroidism has reduced glucose tolerance and it is apt to spill over into the urine much more easily. I believe dextrose given intravenously is more efficacious than given by mouth.

The problem is a virgin one, which certainly should be worked up clinically. It has been shown experimentally quite definitely that a liver damage induced by chloroform anesthesia in animals can be prevented by the administration of large doses of dextrose; that the animal in a fasting condition gets much more rapid destruction of the liver than ordinarily. It may be that a similar condition occurs in these patients with a toxemia of a like nature.

Dr. O. W. Bethea: The very interesting presentation of Dr. Mahorner's has given us much food for thought. In fact, this whole subject has undergone considerable evolution within recent years. It is not long since we were accustomed to seeing statements by the internists such as "a goiter reaching surgical hands represents a blunder on the part of some internist", or a statement from the surgical group, "goiter is purely a surgical disease".

The present tendency is distinctly toward the harmonous cooperation of the two wings of the profession and it is highly possible that this plays a part in the present low mortality rate.

One of the most important contributions of the internist is now recognized as the pre-operative and post-operative care. There is a constantly diminishing tendency to try to treat medically, exophthalmic goiter and adenomatous goiter with hyperthyroidism.

Dr. Allan Eustis: It is very gratifying to hear a surgeon get up and bring out the question of the liver in thyroid disease. Most of you have been members of the Society for a good many years and will remember I have been harping on that for a long while. Last year, I reported two cases, I believe, relieved by treatment of the liver.

I think Dr. Ochsner's points are quite well taken. Opie and Reede, etc. have definitely shown that focal necrosis of the liver, which is the same lesion we find in exophthalmic goiter, can be prevented by the feeding of carbodydrates. Clinically, for years, I have found marked evidence of these factors: toxemia, large liver, and hyperthyroidism.

I do not wish to be put in the position of arguing against surgical treatment instead of medical, but I do want to urge the necessity of considering the liver in preparing these cases for operative procedure.

Dr. Mahorner (In conclusion): As to the cause of liver damage and jaundice in hyperthyroidism our knowledge today is only theoretical, and I certainly agree with the possibility of the theory that Dr. Ochsner expressed. I also agree that probably more of our patients should have large doses of dextrose intravenously in the severe cases before operation.

It brings up the cause of exophthalmic goiter, which is the most interesting phase of the subject. A lesion not in the thyroid primarily but somewhere else in the body is the initial cause. Something stimulates the thyroid to hypertrophy. When we find that stimulus we will find the cause of hyperthyroidism and the cause of the serious concomitant changes, the liver and cardiac damages that occur with it.

I appreciate the attitude and expressions of Dr. Bethea and Dr. Eustis in the matter of collaboration of the internist and the surgeon in these cases. A most important factor in the treatment of exophthalmic goiter is the preoperative preparation and the knowledge of when the patient is in the optimum condition for surgery. These patients do have to be prepared for operation from a week to six weeks, and the management then has a great deal to do with the mortality and ultimate results.

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# A SIMPLE CONTINUOUS-FLOW BLOOD TRANSFUSION INSTRUMENT*

MICHAEL DEBAKEY, M.D.
NEW ORLEANS

The ideal method of blood transfusion; that is, one characterized by simplicity of technic and facility of performance by which a readily determinable and known quantity of whole, unmodified blood could be quickly and easily transfused has long been the desideratum of transfusionists. This is evinced by the expositions of innumerable and ingenious apparatuses abounding in the literature. If it were not for the technical difficulty, the sacrifice of an artery and the inability of calibration, the direct method would be physiologically the most de-

* From the Department of Surgery, Tulane University School of Medicine, New Orleans.

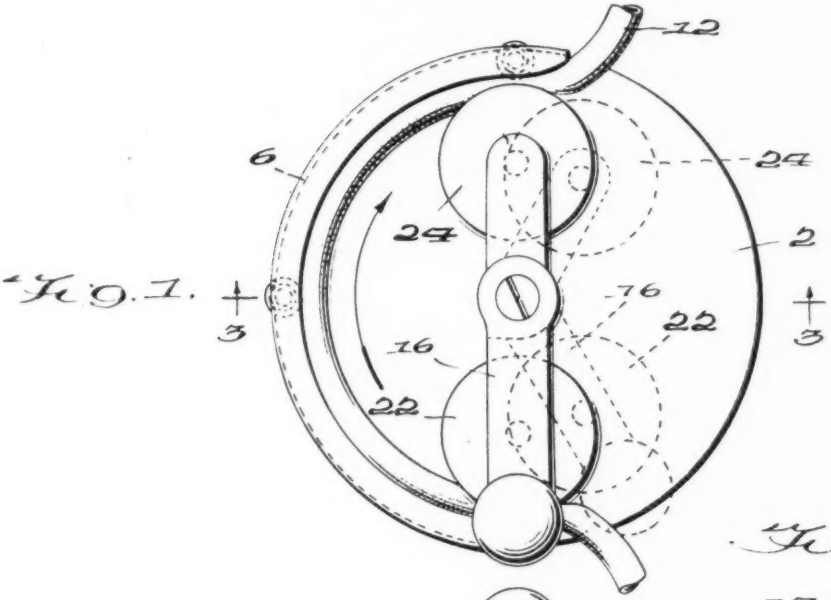


Fig. 1.

Fig. 3a.

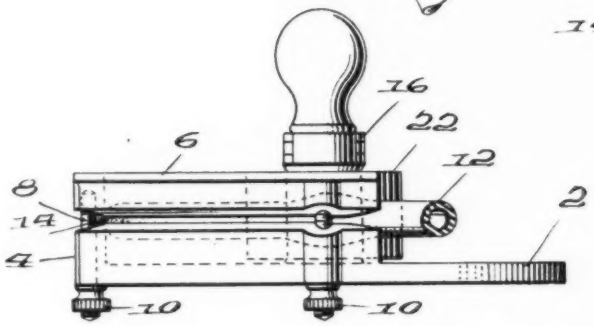


Fig. 2.

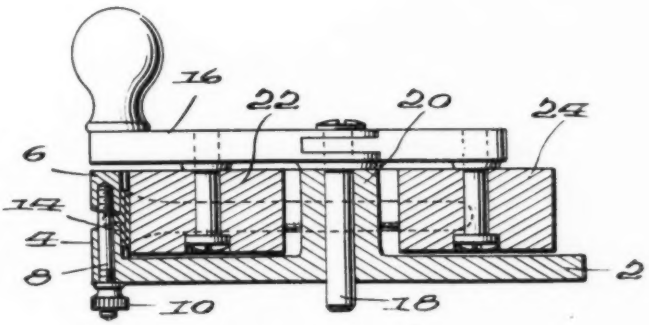


Fig. 3.

Figure 1. Plane view. Diagrammatic representation of instrument.
Figure 2. Side view of instrument.
Figure 3. Cross-section of instrument.
Figure 3a. Cross-sectional representation of tube.

sirable. Thus, the optative method is one which most closely approaches the direct method and for this reason there have been attempts to utilize the "milking-tube" principle in blood transfusion. However, up to the present time these have been bulky, impractical, and have always had the added objectionable feature of "creeping" of the tube. The method described here is based on this principle, but is of such simple construction as to be free of the previously attributed disadvantages.

## DESCRIPTION

The instrument consists of a circular base section, 2 (Figs. 1, 2, 3) having a right angled

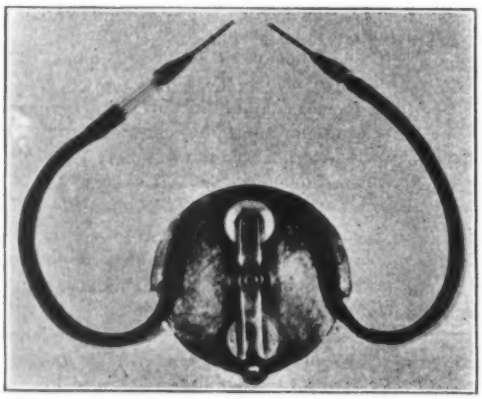

Figure 4. Photograph of instrument. Note the donors' needle on glass adaptor.

peripheral projection, 4 (Figs. 2, 3) throughout approximately 180° of its periphery. An approximate semicircular member, 6 (Figs. 1, 2, 3) is adapted to be placed over the right angled peripheral projection, 4 (Figs. 2, 3) of the circular base, 2 (Figs. 1, 2, 3) and bolted into position by means of studs, 8 (Figs. 2, 3) and thumb screws, 10 (Figs. 2, 3). The rubber tube, 12 (Figs. 1, 2, 3 a) having a flange, 14 (Figs. 2, 3, 3a) on one side is placed against the inside portion of the right angled peripheral projection, 4 (Figs. 2, 3) and secured by placing the semicircular member, 6 (Figs. 1, 2, 3) over the flange, 14 (Figs. 2, 3, 3 a) of the rubber tube, 12 (Figs. 1, 2, 3 a) and bolting the semicircular member, 6 (Figs. 1, 2, 3) to the right angled peripheral projection, 4 (Figs. 2, 3).

The rubber tube is made of a semitransparent pure gum rubber, having a lumen of 1/8" in diameter of constant size throughout and surmounted by a flange substantially as shown in the cross-section (Fig. 3 a), which flange is an integral part of the tube and is of the same material. The tubing is glass hardened so that its inside surface is as smooth as glass. The flange, 14 (Fig. 3 a) is securely fitted between the right angled peripheral projection, 4 (Figs. 2, 3) and the bolted semicircular member, 6 (Figs. 1, 2, 3), thus stabilizing the rubber tubing and preventing any "creeping", which has been an objectionable feature in those previously described instruments utilizing this principle. The tube is also calibrated to pump 2cc. of fluid with each complete revolution of the crank.

A hinged crank arm, 16 (Figs. 1, 2, 3) is pivotally secured to the circular base, 2 (Figs. 1, 2, 3) by means of the crank pin, 18 (Fig. 3) being placed through a bearing, 20 (Fig. 3) upstanding from the center of the circular base, 2 (Figs. 1, 2, 3). The crank arm, 16 (Figs. 1, 2, 3) is provided with two rollers, 22 and 24 (Figs. 1, 3), spaced equally apart from the crank pin, 18 (Fig. 3) and in such a way as to compress the rubber tube, 12 (Fig. 1) between either roller, 22 or 24 (Fig. 1) and the right angled peripheral projection, 4 (Figs. 2, 3) and the semicircular member, 6 (Figs. 1, 2, 3). As the crank arm, 16 (Figs. 1, 2, 3) is rotated in a clockwise direction, the rollers, 22 and 24 (Fig. 1) will successively compress the rubber tube, producing a "milking" effect and thus force the fluid content in a clockwise direction. If the crank arm, 16 (Fig. 1) should be rotated in a counter clockwise direction, the crank arm, 16 (Fig. 1) and the rollers, 22 and 24 (Fig. 1) will assume the position disclosed in dotted lines in Fig. 1, thus releasing compression of the tube and preventing the flow. This flexing will be immediately perceptible to the operator and the counter-clockwise direction of rotation will be promptly discontinued. This flexing of the crank arms and rollers is also of useful advantage in installing and removing the rubber tube by eliminating the necessity of dissembling and assembling any part of the instrument when changing the tube.

## OPERATION

After placing the flange of the tubing between the right angled peripheral projection, 4, and the semicircular member, 6, the nut screws,

10, are tightened and the instrument is sterilized in the autoclave or by immersion in 95 per cent alcohol. The instrument is now ready for use (Fig. 4). Sterile liquid petrolatum is first pumped through the tube by immersing the donor's end of the tube in a small container of this material and revolving the crank in a clockwise direction. Then by immersing this same end of the tube in a container of sterile normal saline the liquid petrolatum is washed out, leaving the tube filled with saline and having an inert coating of mineral oil. The venepunctures are then performed and the respective needle adaptors fitted into the needles of the donor and the recipient and the transfusion begun by turning the crank in the clockwise direction. Each complete revolution gives 2 cc. of blood so that in order to give a transfusion of 500 cc. of blood two hundred and fifty revolutions are made. The donor and recipient ends of the tube are easily recognized by the fact that the former end of the tube emerges in a counter-clockwise direction, whereas the latter emerges in the clockwise direction.

### COMMENT

The safety and efficiency of this instrument were first proven satisfactory by proper animal experiments and then put into use on the Tulane Surgical Services at the Charity Hospital and the Touro Infirmary. Up to date one hundred transfusions have been given, varying from repeated small transfusions of 250 cc. to as much as 850 cc. at one sitting. In every instance the transfusion was completed in a very short space of time with an average of approximately three minutes for the actual tranference of 500 cc. of blood. There was only one mild reaction in this group.

The advantages of this instrument are:

1. The assembly of the instrument consists only of securely placing the flange of the tube in its proper place.
2. Cleansing of the instrument merely means cleaning the tube and the needles.
3. The operation is extremely simple, consisting merely of revolving the crank.
4. Since the circuit of the instrument is so short, being the length of the tubing, about 18 inches, and the flow of blood constant, blood remains out of the body a correspondingly short time and the risk of clotting in turn is very slight. Moreover, there is no dead space in which clotting can initiate and no trauma or fragmentation of red blood cells by valve mechanism or syringe, the blood flowing continuously through a lumen of constant size.
5. The only necessarily sterile parts of the instrument are the tubes and the needles. These can be kept sterile in separate wrappers, thus eliminating the necessity for several transfusion instruments.
6. The instrument can be manufactured at a very low cost and the up-keep is almost negligible as the only replacable part is the rubber tube, there being no breakable parts.

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## MIKULICZ'S SYNDROME CASE REPORTS

W. H. BROWNING, M. D.
SHREVEPORT, LA.

In 1888, Mikulicz reported a case of bilateral, chronic, painless enlargement of the lacrimal glands with an associated enlargement of the salivary glands in a man forty-two years of age. Since that time, a vast amount of literature has accumulated on the subject, but a survey of the literature reveals that we know comparatively little about the cause of this syndrome. Many writers doubt if syphilis is an etiological factor and it is for this reason that these cases are presented.

Schaffer and Jacobsen (1) proposed the following classification of Mikulicz's syndrome.

I. Mikulicz's Disease
   - A. Familial
   - B. Mikulicz's disease proper.

II. Mikulicz's Syndrome
   - A. Leukemia
   - B. Tuberculosis
   - C. Syphilis (?)
   - D. Lymphosarcoma
   - E. Toxic
     1. Lead
     2. Iodides, etc.
   - F. Gout (?)
   - G. Febris uveo-parotidea subchronica.

**Case 1. N. T., Colored male, aged 21 years. Examined February 3, 1930.**

**Patient stated that about January 5, 1930, while driving a gravel truck, he noticed a burning sen-**

Mikulicz's syndrome in a young colored male.

CASE REPORTS

sation of the eyes, but thought this due to the dust and sunlight. The following day he noticed that his jaws were greatly swollen, but the only discomfort was a binding sensation when he attempted to open his mouth. He did not have fever at any time. The swelling of the eye lids and jaws became progressively worse. The past history was irrelevant and he denied having a chancre.

Physical examination was essentially negative with the exception of a marked bilateral enlargement of the lacrimal and parotid glands, which were not tender, but very hard. There was also enlargement of the epitrochlear and inguinal glands. Various laboratory tests were essentially negative with the exception of the Wassermann test and the Butler Precipitin test, which were strongly positive. Biopsy of a small piece of the right lacrimal gland revealed "a low grade inflammatory process, characterized by fibrosis and lymphoid cell infiltration. Probably tuberculous in nature."

Anti-syphilitic treatment was given in the form of neo-arsphenamine and bismuth. There was a marked improvement evidenced by a decrease in the size of the lacrimal and parotid glands. After a short course of treatment the patient moved to a distant city and his present condition is not known.

Case 2. S. H., colored male, aged 52 years. Examined January 8, 1931.

Patient stated that he became ill November 1, 1930, with a cold and fever. He stayed in bed three weeks. About December 1, 1930, while still weak from the past illness, his jaws became greatly swollen and he thought he was developing mumps. His upper eye lids were also swollen. He did not have fever and did not have pain. He had noticed a slight swelling under the chin since about September 1, 1930. His history was otherwise irrelevant except he had a chancre at the age of 32 years.

Physical examination was essentially negative except for a bilateral enlargement of the lacrimal glands, which were very hard but not tender, enlargement and hardness of both parotids, and enlargement and hardness of the sublingual glands. The inguinal and epitrochlear glands were considerably enlarged.

Laboratory examinations were of no significance except the Wassermann test and the Butler Precipitin test, which were strongly positive. Consulting pathologist reported, "examination of the piece of tissue from the lacrimal gland shows it to be the seat of an inflammatory reaction of the infectious granuloma type, there being many discrete and conglomerate tubercles, some of which show small areas of caseating necrosis. The histology is more suggestive of tuberculosis than any other condition."

Anti-syphilitic treatment was given in the form of mercury and potassium iodide. These were continued for a period of one year, the dosage varying according to the tolerance of the patient. The glands were normal in size at the end of three months.

Case 3. S. H., colored female, aged 16 years. Examined March 19, 1931. Daughter of Case 2.

Patient stated that she had always been well until about the middle of February, 1931, at which time she noticed a swelling of her jaws and upper eye lids. She did not have fever and did not have pain. The past history was irrelevant.

Physical examination was essentially negative except a bilateral swelling and hardness of the lacrimal and parotid glands and a marked enlargement of the epitrochlear glands.

Laboratory examinations revealed nothing of significance except the Wassermann test and the Butler Precipitin test, which were strongly positive

Anti-syphilitic treatment in the form of mercury and potassium iodide was instituted. She continued this treatment for about a year.

Cases 2 and 3 were seen in April 1933, and appeared to be perfectly well. A report from the family physician indicates that both are well at the present time.

## CONCLUSIONS

Three cases presenting the typical manifestations of Mikulicz's syndrome are presented. Biopsy was done on two of the cases and the tissue changes would indicate tuberculosis as the causative agent. Treatment in Cases 2 and 3 and to a certain extent in Case 1, indicates that syphilis was the causative agent.

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## SOUTHERN MEDICAL ASSOCIATION MEETING

There has just been completed at the time that this was written one of the best meetings of the Southern Medical Association that has been held in recent years. The attendance was almost as great as was the attendance at several of the record breaking convocations held prior to the depression. This speaks well for the future of the medical profession. It does not seem that it is possible to keep permanently depressed such a great profession as that of medicine.

The physicians and the citizenry of San Antonio extended a most cordial and warm greeting to the doctors who came from all over the South. Always this Southern Medical Association is characterized by sociality and conviviality; at this meeting the men get to know one another, to talk over with their brother practitioner their interesting cases, their difficulties, and their problems. Probably one of the most important features of the meeting is this getting together and getting to know one another. Certainly at a meeting such as this, one of the most agreeable aspects and valuable is the becoming better acquainted with your neighbor or getting to know your more distant fellow practitioner.

The scientific sessions of the Southern Medical Association were excellent both from point of view of scope and character of presentation and from the point of view of the science of medicine. New Orleans, Louisiana, and Mississippi doctors were active in the scientific program. The section meetings and clinics were attended by large numbers of doctors. Some of the sections as a matter of fact were so crowded that it was with difficulty that seats could be found in the meeting room.

Altogether this meeting of the Southern Medical Association was a great success. We recommend to our readers who never attended these meetings going to the meeting next year which will be held in St. Louis. They will enjoy it and they will learn.

## THE BULLETIN OF THE AMERICAN MEDICAL ASSOCIATION

One of the most satisfactory forms of service rendered by the American Medical Association is the distribution of the bulletin of this organization to its members. We would recommend those physicians who are not in the habit regularly of reading carefully this monthly publication to become accustomed to going over its contents thoughtfully and thoroughly. The bulletin deals solely with matters pertaining to the economic and social aspects of medicine. It might be likened, furthermore, to a regular newspaper which keeps its readers informed

concerning many of the activities of the American Medical Association, representing as it does the official organ of the House of Delegates.

In the October issue of the bulletin is a highly informative article dealing with emergency medical relief by Holman Taylor of Texas and W. C. Woodward, Director of the Bureau of Legal Medicine and Legislation of the American Medical Association. Another article is by R. G. Leland dealing with health insurance in England and medical society plans in the United States, and lastly a report from the Bureau of Medical Economics on the care of the indigent sick. The first two contributions could be and should be studied attentively by every medical man interested in the economic future of the medical profession. In the first presentation the physician would secure an intelligent understanding of just how certain social aspects of medicine are being conducted at the present time in the United States. From the second contribution he will learn about the English panel system and then about some of the measures being tried out in this country to supply medical care to persons of low incomes.

This number of the Bulletin of the American Medical Association particularly warrants a recommendation to the medical profession, but this edition is in no way unusual in that nearly all of the other monthly bulletins contain matter which is of primary interest to the thoughtful doctor.

## THEELIN IN CHILDHOOD VULVOVAGINITIS

Last year Lewis* recommended a treatment of gonorrheal vaginitis which apparently has developed into a very successful measure to combat this annoying and prolonged disease of childhood. It is true that the vulvovaginitis in the great majority of instances does very little harm to the child, but potentially it is always a source of trouble and of course on account of its high degree of contagiousness must be conquered or be abolished at the earliest possible moment. The host of treatments that have been advocated for this condition indicate that there is no specific unless Lewis' suggestion proves to be successful, as seems likely at the present time.

The original thesis upon which Lewis based his idea of treating these children with theelin is that the gonococcus can exist only in certain tissues. The delicate epithelium lining the child's vagina makes an excellent growing place for the gonococcus. On the contrary primary infection of the vagina in the woman who has menstruated and whose vaginal epithelium has undergone changes at the time of puberty rarely if ever suffers from a gonococcal vaginitis. He assumes that changing of character of the lining epithelium of the little girl's vagina would ultimately result in destroying the gonococci located therein, which change can be produced by giving theelin, the dosage being from one to three daily injections of 50 rat units. There are no constitutional reactions from this form of treatment. Locally there is hypertrophy and increased vascularity of the lining epithelium. In the treatment of the cases that have been observed by Lewis, as well as by others, it was found that the vaginal discharge would stop in from one to three weeks after the starting of treatment. At the end of this time the smears from the vagina are negative for gonococcus.

In biopsy examination of the vaginal epithelium it is found that three or four centimeters above the hymen the squamous epithelium is no more than about six layers deep. After ten to fourteen injections of theelin the epithelium becomes markedly thickened, from four to six times thicker than before the treatment.

If the hopes that have been held out by this form of treatment become definitely established, as certainly they seem to be at the present time, then will there be a relatively simple method of treating an annoying, disturbing, and depressing condition.

*Lewis, R. M.: Study of effects of theelin on gonorrheal vaginitis in children, A. J. O. & G., 26:593, 1933.

# HOSPITAL STAFF TRANSACTIONS

## TOURO INFIRMARY

The regular monthly meeting of the Touro Infirmary Staff was held Wednesday, November 14, at 8:00 p. m. Dr. Henry Blum presided in the absence of Dr. Sidney Simon.

Dr. Edgar Burns reported a case of transitional cell carcinoma of the left kidney. Photographs of the pathological specimen were shown. The case showed multiple metastases throughout the body, but there were no metastases to the lungs.

Dr. B. R. Heninger, Dr. I. I. Lemann, and Dr. Florence Gilpin each presented a case of typhus fever. All three cases showed positive agglutination against B.proteus X-19. The agglutination reaction was delayed, however, often to as late as the third week of illness. All cases showed a definite rash, which appeared on about the ninth or tenth day, and lasted for about two to five days. These cases were discussed by Drs. Lyons, Eshleman, Ehlert, Reed and Matas.

There then followed presentation and discussion of two cases with autopsy findings.

Willard R. Wirth, M. D.

## MERCY HOSPITAL STAFF MEETING

The first meeting of the new session for the winter season, since adjournment in June, was held on October 18, 1934 in the class room of Mercy Hospital nursing school, Dr. H. De Verges presiding as chairman, Dr. E. L. Zander as secretary.

The mortality report for the months of June, July, August and September was read. Dr. G. H. Hauser then presented the report of the Committee on Deaths.

Case 1. The first case presented was one of a child admitted with vomiting toxemia. The child gave a history of bowels not moving and died shortly after admittance. The child's history was that an appendectomy had been performed in 1933, temperature on admittance was 106°, white cell count was 3700 and 56 neutrophiles. The usual measures were used to get the bowels to move. Glucose infusion was given with no results.

An autopsy was obtained on the child which demonstrated the presence of intestinal obstruction. The abdomen was opened up and a loop of terminal ileum 5 centimeters in length completely obstructed and gangrenous was found. It was sharply demarcated from the bowels. A peritoneal adhesion as thin as a ribbon was found causing the obstruction.

Diagnosis:—Intestinal Obstruction, Retroperitoneal Adhesions, Omental Adhesions to the right rectus muscle and Appendicitis.

Case 2. A girl 21 years of age on August 9, 1934 was seized with severe abdominal pains becoming generalized which was diagnosed as appendicitis. The appendix was removed. It was not ruptured and due to the adhesions and friability it was unable to invert. The womb was drained as the appendix was found gangrenous in character. Temperature of the patient rose and the usual treatment for peritonitis was given. Several consultants were called in and symptomatic treatment given and the patient became rapidly worse and expired on August 17, 1934. The diagnosis, after autopsy which was obtained on this case, was, Septicema, Local Peritonitis, Necrosis of the right rectus muscle, Toxic Hepatitis, Splenitis, Nephritis, Pyelitis.

This case was discussed by Drs. Robinson, Daboval and Richard.

The question was brought out whether drainage was sufficient, also the old question of whether it was wiser to invert or not in appendicial operations. Dr. Richard thought it was possible the appendix should have been inverted and if it was impossible to do this a caecostomy should have been performed, Dr. C. P. Brown believing that the question of drainage depended on the resistance of the patient and not on inversion.

Case 3. A case of left diaphragmatic hernia was demonstrated with atelectasis of both lungs and dextro displacement of heart. This was confirmed by autopsy. The history given was that a child born normally and who died 16 hours after delivery after numerous spells of cyanosis. The child in appearance looked normal. Chest on examination showed the heart to be displaced to the right, breath sounds on the left side absent, autopsy showed the entire left thoracic cavity filled with numerous loops of small bowels and more of the large bowels. This condition was also confirmed by roentgen ray. Dr. A. F. Hebert discussed a similar case.

There being no further discussion of deaths the meeting was adjourned to the executive session.

Edwin L. Zander, M. D.,
Secretary.

## HOTEL DIEU

The regular monthly meeting of the Hotel Dieu Staff was held October 15, 1934, at Hotel Dieu at 8 o'clock p. m. Dr. P. B. Salatich, President, presided at the meeting with Dr. Frank Chetta, Secretary, at the desk.

Dr. H. Theodore Simon briefly discussed the use of Evipal as an anesthetic of short duration for the reduction of fractures, dislocations, and manipulations as required in orthopedic surgery. Evipal which is sodium cyclural is distributed by the Winthrop Chemical Company. It is not a hyp-

notic but a general anesthetic administred intravenously. The package consists of one 10 cc. ampoule of sterile water and one 10 cc. ampoule which contains evipal which is a white crystalline salt. The solution is made at the time of administration and the dosage depends upon the weight of the patient. In this work where an anesthetic of five or ten minutes was required, it was found that about one-half the dose advised was all that was necessary, however, a full dose gives about a fifteen or twenty minute surgical anesthesia. With this small dose, it was found that in ten or fifteen minutes the patient awakened with practically no after effects and in many instances the patients were allowed to walk out of the hospital within an hour after administration. This work on his service at Charity Hospital covered fifty-five cases with no bad effects. This clinical investigation has been conducted mostly by Drs. Hamilton and Farrington, the two fellows connected with his department of Orthopedics at the Louisiana State Medical Center.

Executive session followed and the meeting adjourned at 10 o'clock p. m.

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## THE OSCAR ALLEN TUMOR CLINIC
## CHARITY HOSPITAL
## NEW ORLEANS

At the scientific meeting of November, Doctor J. T. Nix presented the following paper:

### Remarks on Surgery of Cancer

Cancer is essentially a lethal disease. For this reason, primarily, there are many factors which enter into its surgical handling that make cancer surgery different if not distinct.

A knowledge of the type of cancer is most important, a close study of individual cells, whether they assume adult or embryonal types, the degree of anaplasia, the architectural arrangement of cell groups, relative radio-sensitivity or resistance,—these facts together with a study of the location of the tumor, its lymphatic drainage and circulatory supply, and the physical condition of the patient, determine in great measure the preparatory steps to an operation, the type of operation most likely to yield the best results and the postoperative therapy required. The old expression "the best surgeon knows when 'not to operate'" is axiomatic when applied to cancer surgery.

Different areas and varied types of disease in the same area necessitate separate and distinct methods of attack. For example, tumors of the base of the tongue and inaccessible parts of the oral cavity are best treated by inserting radium needles or radon seeds uniformly distanced around the diseased area. The growth should be measured off on a graph and the dosage mathematically determined as far as possible. The cure of cancer by roentgen ray or radium necessitates individual tumor study, uniform irradiation and the administration of a lethal dose of destructive rays to every cancer cell. If this is not carried out and there is a recurrence after the first treatment, very often the chance for a cure has been lost. If the case in question is best suited for radium, a drawing or graph should be made, the diseased area marked off in square centimeters or cubic centimeters according to its depth and the treatment to be administered, indicated as a pattern. This should be adhered to as closely as possible. As a general rule every square centimeter should receive one hundred milligram hours of radium and every cubic centimeter five hundred milligram hours. The total should be delivered over a period of ten days. In addition, the adjacent lymphatic areas should be heavily irradiated.

A biopsy is imperative. It should always shortly precede, or be made at the time of operation. It is our opinion that a biopsy properly secured forty-eight hours previous to the operation can do no harm. Without it records and statistics are valueless and an accurate diagnosis is usually impossible. During the past year more than 275 biopsies have been made at the Oscar Allen Tumor Clinic with no detectable injury to the patient.

Breast tumors as a rule call for surgery. A rush microscopic diagnosis should be made. If the lesion is benign and well circumscribed, simple mammectomy is sufficient. Whenever in doubt as to the presence of malignancy, the extent of the lesion or degree of malignancy, always do a radical mammectomy thoroughly cleaning out the axilla with its pads of fat and surrounding lymphatic tissue along the chest wall. Breast cases should be preceded with a suberythema dose of roentgen ray, delivered through two portals, one over the breast and the other laterally taking in the axilla. The operation should follow within five days of the preliminary radiation and further postoperative roentgen ray therapy should be started about two weeks postoperative. Advanced malignancy of the mammary gland should secure surgery only of a palliative nature. The treatment of choice in such cases should be roentgen ray and radium.

Malignancy of the cervix uteri is usually of the transitional cell type and is highly radio-sensitive. The optimum dose of radium should be delivered at the time of the first treatment. If the radium is properly screened, the vagina packed well to keep the bladder and rectum away from the element, there need be no fear of a fistula, for this very often is the result of improper screening. In many instances it is an indictment against the operator, indicating carelessness, lack of experience or inefficiency. A minimum of 3,000 milligram hours should be given as an initial dose and usually no other is necessary. In some of our Northern domestic clinics 6,000 to 9,000 milligram

hours are given to the cervix and uterus as an initial dose for carcinoma of the cervix, the dose being delivered within the space of one week. Because of contraction and scar tissue formation it is sometimes very difficult and often impossible to place radium in the cervix following the first treatment. Roentgen ray irradiation to the pelvic lymphatics should follow the intracavitary radium irradiation.

Malignancy of the stomach is always surgical. Seldom are these cancers cured because the diagnosis is not made until the disease is far advanced. They are usually slow to metastasize, offering surgery an excellent chance to cure. Diagnosis is never positive until a biopsy has been secured, and therefore exploratory laparotomy is always indicated. Many large tumors represent inflammatory deposits superimposed on a large non-malignant ulcer. This does not always mean extension of the malignancy and grossly it is frequently impossible to differentiate the two. Even with microscopic section, occasional mistakes are made.

Patients should always be given the hope that surgery offers. Prepare the patient with a supportive diet, liver and tonic therapy and transfuse when indicated. At the time of the operation if possible remove the tumor with a wide margin of healthy tissue. If this is not possible and there is gastric stasis drain the stomach through an anterior or posterior anastamosis with the jejunum. Resection should not be attempted in a desiccated, exsanguinated patient until he has been properly built up and prepared for surgery.

Every busy surgeon can recall large stomach tumors that have disappeared following a posterior gastro-enterostomy. In one of our cases the section of an adjacent gland showed apparent malignant invasion. After draining the stomach six weeks through a posterior anastomosis the patient was sent back to the operating room for a resection, but on opening the abdomen the tumor had entirely disappeared and although four years have elapsed there has been no return of symptoms. This patient was given roentgen ray therapy following the anastomosis and large doses of hydrochloric acid orally.

Malignancy of the colon is slow to metastasize, in consequence of which even with a delayed diagnosis the patient frequently can be cured. Colon malignancy is nearly always surgical. As a rule, whatever operative work is decided on, hazards can be greatly lessened by a two or three stage operation. In malignancies of the caecum and ascending colon it is well as a first step to make an anastomosis between the ileum and descending colon or sigmoid, eventrating the malignant bowel over the abdominal wall, and resecting later. In malignancies of the sigmoid and rectum a colostomy of the descending colon should first be done with a resection of the diseased bowel later. In some instances it is possible to reconstruct the bowel in a subsequent operation. Do not hesitate to form a permanent colostomy whenever necessary to thoroughly remove the disease. Anything less than radical surgery spells disaster. Colon cases should always receive postoperative roentgen ray irradiation.

Cancer of the bladder whenever possible should be excised through a suprapubic incision and later be given roentgen ray therapy. When this is not possible because of the extent of the tumor radon seeds should be inserted, remembering that a seed of one milicurie should be placed for each square centimeter of disease. Six to eight seeds distributed to a lesion having a surface area of twenty square centimeters would not only be of no avail but would in all probability do real harm. All lesions, no matter where found, should have a uniform exposure to radon or radium therapy.

Carcinoma of the prostate is as a rule a slow growing tumor, best treated by the introduction of radium needles or seeds through the perineal route and keeping the channel open by electro-surgical resection as indicated. Supra-pubic cystotomy is sometimes necessary to effectively carry out the treatment. Deep roentgen ray therapy to the pelvis should always follow.

In surgery of the skin it is most important to know the true significance of the pathological report. For example, a case recently was observed when the diagnosis of a skin lesion was a "squamous cell malignancy, grade 1." The patient, according to history, had an ulcer on the hand the size of a fifty cent piece. As a rule, thorough removal with a healthy skin flap transposition should suffice. Instead the patient lost four-fifths of his hand by amputation. It is always important to know the radio-resistance or radio-sensitivity of the tumor, for many skin lesions are cured easily by irradiation.

The use of a radio-knife is imperative to secure biopsies and is an additional safeguard that should be used whenever possible in operative work.

The slogan of the American College of Surgeons, "Cancer is curable" is true, but it can be accomplished only by thorough, systematic team work between the clinician, the pathologist, the surgeon and the radiologist. Early diagnosis is of extreme importance, but in spite of its absence in the majority of cases, a thorough understanding of the nature of malignancy, its radio-sensitivity and resistance, the services of a skilled surgeon and a specially trained cancer radiologist, result in the cure of many apparently hopeless cases and a larger number are given immeasurable relief.

Doctor James Ewing of the Memorial Hospital, New York City, says "as our efficiency in irradi-

ation increases, resistance will diminish." He believes that the methods of irradiation prior to the last five to eight years were so crude that conclusions based on the results obtained with them should be scrapped. In the past few years the skin, oral and cervix malignancy have been taken from the province of surgery and in a large majority of cases properly placed in the department of radio-therapy. As our aggregate knowledge increases, greater and more radical changes in treatment will follow with an increasing proportion of added relief and cures.

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### J. T. NIX CLINIC
New Orleans

At a meeting held in November, T. J. Dimitry, M. D., presented the following paper: The Polyp as the Factor in Pterygium Oncoming.

We possess innumerable facts concerning the pterygium, most of which are results of intensive studies; yet we are unable to deduct from them a satisfactory conclusion, probably because a link is undiscovered for a completion, or it may be that we have not analyzed properly that which is before us. The evidence at our command concerning it is so exact that some actually think there is an "understanding of the true nature of the condition"[1] which warrants the declaration of a great achievement. Others, however, say there is a confusion, and this to such an extent that they are willing to demoninate the pterygium as "'an enigma,"[2] and even compare it to the juggler and his tricks.

My contribution starts with the assertion that the pterygium is a tumor by origin, and upon this is built the hypothesis that the beginning is a mucous polyp, a tumor, which provides the essentials for the pterygium's oncoming and growth. This declaration as to how it starts is submitted as the link in the chain of known facts and maintains that such a concept answers all the difficulties for the removal of confusion.

The uncertainties concerning the cause of growth may never have come about, if the portrayal of action and movement as given by the Egyptians[3] in the earliest of history had been held to, rather than accepting of simple description of form, as given by the Greeks at a later period.[4] The first saw growth, the latter only a form, namely, a wing of a small insect, and having all its markings.

The pterygium is here defined as the consequence of a previously existing conjunctival pathology, a polyp which on contacting the limbus excites the changes that are responsible for the development.

The beginning so definitely belongs to the conjunctiva that it is not necessary to introduce the evidence of greater exposure of a less resistant tissue, viz. cornea, to exclude the belief of dust and exciting heat winds, to explain that the pterygium does not originate in the cornea where it would have, had such causes brought it about.

There is no great effort necessary to recognize a conjunctival pathology preceding the pterygium oncoming in a large percentage of people resident in tropical and semi-tropical climes, viz. the loose and edematous conjunctival tissue at the palpebral aperture. Often these elevations in the conjunctiva are so definite that they appear as edematous masses, the polyp, and if the course of the vessels is followed, any doubt had of its existence is removed. The rounded mass is seen to become horizontal and to the extent of contacting the cornea. At this time, the vessels on the mass are increased, and then a constriction half its length takes place, dividing it into two triangles with apex in juxtaposition. The smaller triangle which is the one near the limbus has a clearer outline and may remain quite edematous for years. The larger triangle is better supplied with vessels than the smaller and is not so swollen. The elongation and division of the mass is apparently brought about by the lids constricting a loose tissue. (The polyp is a type of loose tissue as would respond to such constriction.) Subsequent grayish chalk-like bodies appear in the deep layers of the conjunctiva, and are observed to have a tendency to gather in this smaller triangle, though they may also heap up on many parts of the altered area of conjunctiva. It is now the pinguecula, the name given the change brought about. *Fuch's hypothesis for the pterygium is that it is in consequence of a nutritive disturbance at the limbus, brought about by the progress of a pinguecula.*

Considering further the globular mass, it is maintained that it is caught between the lids and made to contact the cornea, most times maintaining a ridge elevation or small triangle (the pinguecula type.) At other times, it is flattened out, giving the appearance of a fully developed pterygium even though the head has but slightly progressed on the cornea. The chemistry of this mass is here claimed to be responsible for exciting the pterygium and bringing about the characteristic changes that follow.

Now that the cornea becomes involved, the pterygium is revealed as an elevation under the conjunctiva and corneal epithelia, having grown from the first by a proliferation of fibroblasts, into and destroying Bowman's membrane, and lays down the bodies that go to make up the head of the pterygium. That it is subepithelial in both is definitely shown by cutting the periphery of the head, when is seen the loose tissue beneath which pulls away from the cornea easily, and but the slightest effort is necessary to introduce a probe hori-

zontally into the loose tissue, the length of the growth.

The pterygium begins as a subepithelial pathology in the conjunctiva and continues subepithelial in the cornea. At first, a globular mass subsequently becomes elongated, and then assumes the triangular shape because of the loose tissue and of pressure. It is at first a loose bundle of connective and elastic tissue fibres forming a mesh in a matrix in which spread blood vessels and lymphatics. As its globular shape is changed it becomes fixed to the cornea. It is restricted to a definite direction by the lids (horizontally.) The toxic substance from what was a globular mass excites the cellular activity at the periphery of Bowman's membrane destroying the latter in part, and provoking a deposition of collagenous bodies, which bodies raise up the corneal epithelium.

Had they who wrote so instructively on the pterygium stressed the subepithelial histology and not the epithelium a better understanding by this time may have come about, and we would not be called upon to contend with supposed causes such as heat, glare and irritating substances entering the eye by the palpebral split and provoking a fleshy mass of hypertrophied conjunctiva. There is no denying that the pterygium's stroma structure is the essential part of the pterygium's existence and that the epithelium is a covering that demands less consideration by comparison.

It is not new to advance the belief that the pterygium begins as "a small hyperthrophy having the character of multiple polypi, developing at the expense of a subconjunctival tissue and locating it between the epithelium layer and the sclerotic," for Schreiter[5] in 1872 so expressed himself after having made study, and this in spite of an imperfect technic.

Neither is the folding of the loose conjunctiva tissue *such as can be brought about in a polyp type of tissue* new as a principal cause in pterygium production, for DeWecker has this to say, "The conjunctiva must present a certain degree of looseness," and Gayet[6] tells of the changes in the conjunctiva looseness brought about by the movements of the eye, and that the pulling on the conjunctiva sets up a nutritive lesion.

Treigny thinks "that the looseness of the conjunctiva in the production of the pterygium—an important agent not to be neglected," and Bond[7] says "that this growth is not seen among young and vigorous individuals in whom the conjunctiva remains close to the globe.." This existence of looseness has so impressed some that they are willing to state the pterygium to be a pathology found in alcoholics and in those suffering edematous tissue or at least that such subjects more readily have a pterygium developemnt.

The tumor theory has been sanctioned by many even in our day, viz: Redslob, Oliverio y Castro (Porto), Poyales Joaquin da Paula Xavier and Gomez Marquez. The latter recites that only a tumor nature gives the explanation for the growth and recurrences. The polyp is a type of tumor.

It may appear new to hear it stated that a difference in tissue chemistry has brought it about, *that of a polyp chemistry acting on the membrane of Bowman, the part that becomes involved*, but it is definitely not new to find statements as follows: Fuchs—"that the pinguecula provokes nutritive disturbances in consequence of an alteration in the juices to the cornea." Elsewhere he says, "Pinguecula could be a pathological metamorphosis at the limbus which exercises a particular influence over the nutritive substances." He speaks of a chemical change of the blood plasma level with the limbus that would excite the superficial lamellae of the cornea, making a real subepitheial cicatrix.

Graefe adds force to Fuchs' contention when he states that "it is only when the substances which brought on a pinguecula are still active." The polyp's substance could have done this. Gallenga is supposed to have found a cavity in the first existing condition that he claims as important in the production of a pterygium. Both the pinguecula and pteryygium have an extremely loose structure. Lyritzas declares it a degenerative change, but he does not say if it is chemical or tissue deposition. Terrien says that if the pinguecula is the cause, "it is then the produce of the breaking up of a degeneration."

The factor that is accountable for the production of the pterygium is the polyp's chemistry. However before the pterygium starts to grow on the cornea, the pinguecula usually precedes. This latter need not necessarily happen for it is a change in the polyp, and may not be seen when the polyp is flattened instead of becoming elongated.

In the loose fibrillous tissue from whence the growth is seen to start the vessels become a gelatinuous substance around which subsequently becomes hyaline and reduces the caliber. Also in the mass is seen changes in the two types of tissue fibres, viz: the connective and the elastic. In the center of the polyp-like mass the looseness exists to such an extent as at times to consider it a cavity. Gallenga has made statement of the existence of such a cavity.

I visualize this loose subepithelial mass becoming limited by the lids and forced as it was to continue under the epithelium of the cornea. It is at the time the ballooning reaches the limbus that the changes in the cornea are brought about. It is argued that the contents of the first provokes these changes.

Pertinent to this reasoning is, first, that of Goldzieher, who sees the young connective tissue cells

of this mass being epitheliomatous. Redslob, the destructive character of the cells of the original mass on the periphery of the membrane of Bowman which latter becomes broken up into lamellae and disappears. Fuchs sees the cells of the mass that has lifted the covering up, elongated and compares them to rays of light. He noted in advance of the head blemishes which have since become designated as the islands of Fuchs. These blemishes are deposits of connective tissue rich in fibres and having elongated nuclei. Schoninger adds that the mass under the head is of a fascicular appearance which connects through a small tube that traverses Bowman's membrane to the stroma beneath. He recites that a migratory cell passes through the nerve opening to reach the vesicle and assists in the excitation of this homogenous substance.

Before concluding it is proper to tell of the newformed cells, the mucin, the hyaline bodies and the connective and elastic tissue fibres, for in each there is a chemistry that may contribute to the changes that are brought about.

The new cell formation most nearly approaches the newformed fibrous tissue, the fibroblasts, such as is noted in areas of inflammation. They contain a larger amount of water than the adult tissue. Their nucleoprotein is particularly high, which during karyokinesis becomes more acid.

The mucin substance provokes discussion, for it is not understood if the edematous condition interferes with the removal of the mucin, or the increased mucin leads to the retention of fluid which diffuses out from the vessels. It appears reasonable to state that where mucin is present, the interstitial substance becomes granular and shows a network. "Mucin is a compound protein and consists of a protein radical and a conjugated sulfuric acid which contains nitrogenous sugar."

The stroma of the pterygium is described by Fernandez de la Cruz, as a hyperplasia of connective tissue with an increased vascularity, which subsequently atrophies. He considers the changes that precede the membranous formation as a sarcomatous period. Fuchs notes the increased connective tissue fibres, the sclerosis of the elastic tissue fibres and a translucency that is to be seen in places. Stella studies the distribution of these fibres and their alterations; Gallengo the changes in the vascular walls and lymphatics.

C. Trapesontzian made particular study of the connective tissue fibres and describes them as becoming thicker, straightening by traction, into bundles made parallel and having a pulling effect on the conjunctiva.

The hyaline bodies so commonly observed in the pterygium have been emphasized by Fuchs, to such an extent that others fear he has stressed this change too greatly. He describes these bodies as of a homogenous character both for the pinguecula and pterygium, but recites that they do not take on the acid stain in the pterygium as do the hyaline bodies found in the pinguecula. The homogenous bodies in the pinguecula stain freely with eosin, in the pterygium they do not. This difference of staining has been the occasion for much study, some thinking that the substance might have been amyloid, but the final conclusion was that it was probably the precursor of the amyloid. Whatever it is, it is to be remembered that there is no one chemical compound "hyaline" that produces a hyaline appearance.

The chemistry of the two tissues, that of the polyp and that of the healthy cornea, will follow in another paper under preparation and still another, a statistical study, the geography of the pterygium for the United States of America in which New Orleans is shown as having the greater percentage of pterygia.

These series reveal that the old explanation of cause is no longer acceptable, however, the polyp is acceptable, and it is not a difficulty to visualize how the polyp is produced.

REFERENCES

1. "Through centuries the name only has remained constant, the etiology, anatomy, pathology, and therapy having undergone various changes and revisions until the present day, when at least we think we understand the true nature of the condition."—The American Encyclopedia of Ophthalmology, Vol. XIV, p. 10445.

2. "And without doubt it is a mystery."—Merigot de Treigny and Coirre, The Pterygium A Monograph, p. 1.

3. Costomiri, p. 50, Text Book on Ophthalmology of Ancient Greece, quotes Ebers as saying in the papyrus that the name maladie of the crocodile is applied to the pterygium because of action and resemblance with the head of that animal.

4. Hippocrates, 460 B. C., gave it its name "pterygium". It suggests a wing of a highly specialized order of insects, hymenoptera. The word is derived from the Greek trepuylov meaning "a little wing."

5. Schreiter, Untersuch u das Flugenf, Leipzig, 1872.

6. Gayet, Clinical Lessons, 1893.

7. Bond, On the Origin of Pterygium, Oph. Review, June 1889, p. 161.

## KING'S DAUGHTERS' HOSPITAL STAFF MEETING

Greenville, Miss.

The monthly meeting of the King's Daughters' Hospital staff was held Wednesday evening, October 7, Dr. John F. Lucas presiding. After a brief business meeting case reports were made as follows:

Uremia—A report of an unusual case by Dr. T. B. Lewis.

Myelogenous Leukemia—A case report by Dr. J. G. Archer.

Morbidity Report—From the Health Department presented by Dr. John W. Shackelford.

John W. Shackelford,
Secretary.

Uremia—Case report by Dr. T. B. Lewis:

A white male, aged 50 years, teacher, came in complaining of bladder trouble, a condition which had troubled him for a long time. For five or six years he had had trouble emptying his bladder. He was emanciated and walked with a stick.

The first impression was of a stricture. On examination a catheter was introduced without difficulty; seven pints of urine were removed. Further examination revealed 25 per cent enlarged prostate and an irritable posterior urethra. The bladder was greatly dilated and apparently partially paralyzed. The urethra and bladder were washed out with a mild antiseptic solution and the patient told to report on the following day for another catheterization.

He was catheterized daily for about two weeks when the operation became so painful that he could no longer stand it. He was then brought to the hospital and a catheter put in and allowed to remain. Much urine passed; the urine was essentially negative. Within 24 hours after admission to the hospital symptoms of uremia and bebinning coma were in evidence. Death came forty-eight hours later.

Myelogenous Leukemia.—Case Report by Dr. J. A. Archer.

When we speak of leukemia, we think of the two kinds, myelogenous, in which the cells originate in the bone marrow, and lymphoid in which the cells originate in the lymphoid tissue, and recognize that this is a pathological condition in which there is extensive hyperplasia of the leukoblastic tissue with the appearance in the peripheral blood of abnormal white cells.

In 1845, Hughes Bennett and Virchow independently described the peculiar white appearance of the blood at autopsy, the massive enlargement of the spleen and the presence of exceedingly large numbers of leukocytes in the blood. Bennett called the disease "leukocythemia," Virchow "leukemia." Both failed to observe that the white blood cells differed quantitatively from those found during sepsis. Virchow later distinguished a "lymphatic" and a "splenic" form of the disease, while in 1870, Neuman, after noting changes in the bone marrow, proposed the term "myelogenous" to describe the third type. Erhlich, however who introduced the differential staining of leukocytes in 1891, distinguished two types of cells in leukemia (a) granulocytes, granular leukocytes of bone marrow origin, which occur in splenomyelogenous or myelogenous leukemia and (b) non-granular cells of lymphatic origin seen in lymphatic leukemia. This division is still that most satisfactory and generally accepted.

I am going to review with you the symptoms as given in our text books so that we can compare with the symptoms of the case being reported and note that nothing in the history of this case is suggestive of the condition found, and this is another proof that every method of precision available is justifiable in the study of our patients, even though at times one might think he has put his patient through more tests than are necessary.

The text books tell us that the onset is gradual and insidious as a rule, that the patient usually complains first of symptoms due to the greatly enlarged spleen, such as a sense of weight, or dragging, or of those which result from anemia such as langour, pallor, weakness, loss of weight, vertigo, palpitation, dyspnea or intestinal disturbances.

It will also be interesting here to review the typical text book blood picture. The hemoglobin is reduced to 40 per cent or 60 per cent or less. The red blood cell count ranges from 2,000,000 to 3,000,000 per cubic millimeter. Color index is low: slight anisocytosis with poikilocytosis is the rule. Polychromatophilia and basophilic stippling are consistently observed. The red cells are often nucleated; normoblasts predominate but megaloblasts can be found in some cases. The number of blood platelets is increased. The white blood cell count is frequently several hundred thousand or may even rise above one million per cubic millimeter. The presence of myelocytes and myeloblasts in the peripheral blood is the significant finding. In a stained blood film there is (1) a great relative and absolute increase in the number of ordinary polymorphonuclear neutrophilic leukocytes, (2) a relative and absolute increase in the eosinophilic and basephilic leukocyte count as a rule, and (3) cells may be found which normally occur only in he bone marrow (a) myelocytes with neutrophilic eosinophilic and basophilic granulations, and (b) myeloblasts. With these facts well established in our minds let us turn to the case to be reported.

Patient was white male, aged 40 years, married, father of two children. The family history and past history were negative.

Chief Complaint.—Indigestion.

Present Illness.—About thirty days previous diaphragm and lower chest became sore, especially at the lower end of sternum and worse when constipated. No real pain in stomach but a burning and tumbling around feeling. Appetite fair. Bowels constipated. A feeling of sluggishness at times, and headaches occasionally.

Physical Examination.—Patient 5 feet 8½ inches tall; normal weight 165 pounds, present weight 153 pounds; B.P. 122/76; P. 80; T. 99°. Tongue coated. Gums rather glossy in appearance. Tonsils out. Post cervical glands palpable. Epitrochlears and axillaries not palpable. Inguinal glands palpable. Heart regular, no murmurs. Accentuated second aortic. Lungs resonant throughout. Abdomen soft, no masses. A small slightly tender

spot beneath the right costal margin in the gall-bladder region. Spleen not palpable. Rectal examination, prostate not enlarged. No edema of extremities, knee jerks somewhat exaggerated.

Urinalysis—Negative. Blood Wassermann negative. Blood count: Hb. 80 per cent; R.B.C. 4,880,000; W.B.C. 27,600; L. 29, M. 7, Polys. 61, Eo. 3. Sputum negative. Fractional test meal: Free HCl. 7-30-54-58; Total acidity 28-46-80-87.

To complete the examination roentgenograms of teeth, sinuses, chest, stomach and gall-bladder were made with negative findings.

This patient's leukocytes have ranged from 27,600 up to 72,750 in five months time; he has shown an increasing number of myelocytes, but his hemoglobin has continued to be 80 per cent and his red blood corpuscles the same all the time, namely over four million and a half.

He was advised as to the seriousness of his condition and further advised to submit to deep roentgen ray therapy, which he did. Hanging on to any thread of hope he and I decided that he consult Dr. W. Kraemer of Wilmington, Del., and submit to whatever experiments Dr. Kraemer wished to put him through. Dr. Kraemer admits that his work is still in the experimental stage, and as far as I know he has not as yet published his theory and method of treatment. He, however, does give patients lead and also weekly injections of a bacteriophage in addition to roentgen ray.

At present my patient is doing nothing but leading a very quiet life. He states he feels fine, appetite good, weighs 163 lbs., a gain of ten pounds, and makes the statement that he believes in a month or so we will be able to make a definite pronouncement regarding what his physical status will be.

This case is extremely interesting to me from several standpoints:

First—his symptoms were not typical or suggestive of leukemia in any way.

Second—his hemoglobin and red blood cells have not shown the usual decrease even though he has had the conditiion we know for five months and possibly two or three months longer.

Third—he is most intelligent and has from the first made a study as much as possible of the condition with a decision to do all in his power to get well.

Fourth—there has been no enlargement whatever of spleen.

Fifth—knowing that all previous forms of treatment have failed in arresting this condition, he has been given during the early course of his disease the one chance that holds out a faint ray of hope for him even though this line of treatment is still in the experimental stage.

## VICKSBURG SANITARIUM STAFF MEETING

The regular monthly meeting of the staff of the Vicksburg Sanitarium was held on November 12 with twelve members and four guests present. Dr. G. M. Street, president, presided. After the business of the staff and consideration of reports from the records department and analysis of the work of the hospital, special case reports were presented as follows:

1. Duodenal Ulcer with Acute Hemorrhage.—Dr. J. A. K. Birchett, Jr. Discussed by Drs. L. J. Clark, Leon S. Lippincott and S. W. Johnston.

2. Meningo-Encephalitis, Acute.—Dr. R. A. Street, Jr. Discussed by Dr. G. M. Street.

3. Fracture of the Zygoma Involving the Orbit.—Dr. W. E. Johnston. Discussed by Drs. H. H. Johnston and S. W. Johnston.

Dr. H. H. Johnston presented a report of the recent meeting of residents and ex-residents of the Mayo Clinc.

The following cases from the cancer clinic were discussed:

1. Dr. G. M. Street—Lymphoblastoma of Left Inguinal Nodes.

2. Dr. A. Street—Squamous Cell Carcinoma of Urethra (Grade I); Folliculoma of Left Ovary.

3. Dr. J. A. K. Birchett, Jr.—Squamous Cell Carcinoma of Cervix Uteri (Grade III).

Three-Minute reports of the Literature of the Month were given as follows:

1. Dr. G. M. Street—Surgery in Diabetes; Appendicitis in the Aged.

2. Dr. A. Street.—Carcinoma of the Thyroid.

3. Dr. Leon S. Lippincott—Specific Chemotherapy in Malignancy.

4. Dr. J. A. K. Birchett, Jr.—Cystico-choledochostomy; Subfundusetomy.

5. Dr. R. A. Street, Jr.—Relation of Premenstrual Endometrium to Symptoms.

The meeting closed with a lunch.

The next meeting of the staff will be held Monday, December 10, 1934.

Leon S. Lippincott,
Secretary.

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Vicksburg Sanitarium Staff Meeting, November 12 1934.

Abstract.—Meningo-Encephalitis, Acute.—Dr. R. A. Street, Jr.

Patient.—White male; aged 26 years, married; admitted to the Sanitarium October 12, 1934, unconscious.

Present Illness.—(Obtained from family).—About four o'clock on the afternoon of October 12 patient was found unconscious by wife in the field. Previously he had been in apparently normal health, and had only left the house about an hour before this happened. He had complained of some headache and slight malaise for several days, but

had no other symptoms. He was brought immediately to the Charity Hospital, having been given one-half grain of morphine hypodermically. This dose was repeated at the Charity Hospital, but he continued to be restless and did not make any progress toward regaining a state of consciousness. He was later transferred to the Sanitarium for further study and treatment.

Past History.—Patient had been under treatment for malaria with chills and fever during the past year. The last attack was about six months ago and he had not taken no quinine in the past two or three months.

Family History.—Not remarkable.

Physical Examination.—Temperature 102.6°F., axillary; pulse 110; respiration 24. Breathing was labored. Well nourished and well developed; unconscious. Pupils were small and regular, sclerae were clear, eyeballs moved involuntarily from one side to the other, pupils showed no reaction to light. Tongue dry and coated. Few scattered rales over the bases of both lungs. Heart not enlarged, rate was slightly increased, no murmurs. Nothing was found in the abdomen. The genitalia were normal. Rectal examination showed a normal prostate gland, and was otherwise negative. Deep reflexes were present and active on both sides. Leukocyte count on admission was 16,300, differential count showed 9.5 per cent mature polys. and 79.5 per cent band forms; no malaria was found. Roentgenogram of thorax negative. Catheter specimen of urine showed a trace of albumin. Another blood specimen taken the next morning showed 27,700 leukocytes with 32.5 per cent mature polys and 46 per cent band forms. A spinal puncture was done when the patient was admitted and fluid showed a cell count of 9, globulin was slightly increased and the colloidal gold curve suggested paresis. The spinal fluid Wassermann was negative. The blood Wassermann was also negative.

Subsequent: Patient was given 600 cc. of 10 per cent glucose the night he was admitted, and was given one-half gram of sodium amytal in the vein which quieted him for a period of a few hours. His condition became progressively worse, the temperature and pulse gradually rising, and the restlessness soon returning and remaining in spite of frequent doses of morphine and atropine. He expired just after noon of the next day, and an autopsy report showed the principal cause of death to be acute meningo-encephalitis. It was interesting to note in the autopsy report that the patient also had passive congestion of the lungs, spleen, and adrenals, and also had tuberculosis of a mediastinal lymph-node.

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Abstract.—Fracture of the Zygoma Involving the Orbit.—Dr. W. E. Johnston.

Patient.—White male, aged 19 years; admitted to Sanitarium October 2, 1934.

Chief Complaint.—Injury to the right eye and cheek.

Present Illness.—About two hours before admission, patient was in fist fight and received a blow below the right eye. There was very little pain but in a few minutes there was much swelling and as the swelling progressed excruciating pain and shock developed.

Physical Examination.—It was obvious that the patient was suffering from intense pain. There was evidence of slight shock. The patient was conscious and had been so from the very onset. The entire right side of the face was badly swollen and discolored. He was unable to open the right eye due to the swollen lid. On palpation there was marked depression of the cheek and lower margin of the orbit. There was loss of sensation over the area supplied by the infraorbital nerve, extending from the midline of the nose over the right side of the face and including the upper teeth on the right side. The right side of the nose was swollen and filled with blood clot. Another important physical finding was a severe acute upper respiratory infection with bronchial involvement.

Roentgen Ray Examination.—The vertical view showed a displacement backward of the zygoma, about one-half inch. The fracture extended into the floor of the orbit for about three-quarters of an inch. The right maxillary sinus was cloudy, probably filled with blood.

Treatment.—The following day after admission, under gas anesthesia, a small incision was made over the site of the depression. A drill, size 1/16 inch, was used to make a hole in the depressed fragment. A small hook made from the threaded end of a bicycle spoke was screwed into the opening. With slow steady pull the fragment was drawn forward. The screw was attached by a rubber band to a projecting hook which had been imbedded into a plaster head cap before administering the anaesthesia.

Progress Notes.—October 4—The patient is very restless and spitting up a large amount of bloody mucus.

October 6. The eye can be opened slightly. There is marked diplopia; moderate conjunctivitis.

October 10. The swelling has disappeared and the conjunctivita has cleared. The diplopia has disappeared. The sensation is beginning to return to the face and to the teeth.

October 15. The pin is removed from the fragment.

October 16. Examination of the eye shows no abnormalities. There is no disturbance in vision. The nose is clear. The upper respiratory infection has disappeared. There is no evidence of sinusitis.

November 14. Patient states that there is no discomfort or pain in the region of the fracture. All swelling has subsided. Sensation has returned to the face and to the teeth though a slight hyperesthesia in the upper lip is present. There is no evidence of displacement of the fragment. There is no sinus involvement.

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Abstract.—Duodenal Ulcer With Acute Hemorrhage.—Dr. J. A. K. Birchett, Jr.

Patient.—White male, aged 31 years, salesman; admitted to Sanitarium September 8, 1934.

Chief Complaint.—Fainting and weakness associated with passage of large dark stool.

Present Illness.—Yesterday while riding in car through the country had desire to defecate; got out of car and had large bowel movement which appeared to be "black as coal dust." After bowels moved began to feel so weak and faint that he decided to drive on home without finishing his route. Went to bed on arrival and took dose of castor oil. Had a restless night but no pain. About one hour before I saw patient he had had large bowel movement, mostly blood, and on way back to bed from bathroom nearly fainted and later vomited several clots of blood and about a quart of dark fluid. Has had no pain.

Past History.—For past six months had been having burning symptoms in stomach mostly after he went several hours without eating or when he was out on road and did not take food regularly. Discomfort never severe enough to consult doctor. Had been taking alcohol in varied amounts for past few months, more than usual. Had not lost any weight and had had a good appetite, ate quantities of highly seasoned and fat foods. Had had several attacks of renal colic. Appendix removed in 1913; tonsils removed in 1924.

Physical Examination.—Well developed and nourished white male lying in bed with rather anxious pallid appearance. Temperature 99.4°F., pulse 88, blood pressure 180/120. Teeth show many fillings on subsequent roentgen ray examination but no caries. Tonsils out, thyroid negative, normal heart sounds, rate increased; lungs normal; slight rigidity over upper abdomen and some pain elicited in upper right quadrant described by patient as a hot spot on pressure. Well healed appendix scar. No hernia; genito-urinary tract negative. Skin rather pallid and mucous membranes anemic.

Clinical Laboratory.—Wassermann, Kline and Young, and Kahn tests, negative. Urine negative. Blood: Hemoglobin 77 per cent, color index 1.25, erythrocytes 3,110,000, leukocytes 8,200; differential leukocyte count, small lymphocytes 35 per cent, large lymphocytes 5 per cent, polymorphonuclears, mature forms, 20 per cent, band forms, 37 per cent, eosinophils 3 per cent. No malaria found.

Procedure And Progress Notes.—It was evident that this patient was giving evidence of considerable shock from an acute hemorrhage from the gastro-intestinal tract. I think the history presented evidence enough to make a diagnosis of bleeding duodenal ulcer. The first step was to replace the lost blood volume as evidenced by the red cell count and the lowered blood pressure. On September 8, the day following initial onset, patient was carried from home to the Sanitarium by ambulance, a donor typed and 600 cc. of citrated blood given by indirect method. The change for improvement was marked. No more blood was vomited but there were two more copious stools of old blood on September 9. On September 10 patient began to complain of hunger and two ounces of cream was administered every two hours which relieved empty feeling in epigastric region. A powder of calcium carbonate, magnesium oxide and bismuth was also given every four hours and on September 11 two ounces of milk and two ounces of cream were given every three hours and taken with relish. Obstipation occured and complained of abdominal fullness. Lower abdomen tympanities to percussion. Several enemas finally relieved the condition and on September 12, petrol oil, one-half ounce at ten, two and six begun; the milk and cream was supplemented with salt free broth and cereals of very fine texture. On September 14 patient was up in wheel chair, red blood count having advanced to 4,000,000. Patient was permitted to go home on September 15 with continuation of alkaline powder, usual second and third week ulcer diet and ten grains of reduced iron before meals.

Patient gained strength and four weeks after initial attack was permitted to return to work with diet restriction, no alcohol or condiments and smoking forbidden for present. A roentgenogram of stomach and duodenum showed no deformity, this, however, not being of great importance in ruling out the presence of ulcer as, in my opinion, this was an ulcer of recent development and there was not time enough for it to form scar and contraction with deformity usually found in duodenal ulcer. I do not think hemorrhage was from gastric varices. There was no evidence of liver enlargement or portal interference. This patient is still on diet and alkalies, is symptom free and feels better than in past three years. He will be kept under observation and fluoroscopy of stomach and duodenum rechecked in six months.

# TRANSACTIONS OF ORLEANS PARISH MEDICAL SOCIETY

## CALENDAR

DECEMBER 3 Eye, Ear, Nose and Throat Hospital Staff, 8 P. M.

DECEMBER 5 Clinico-Pathological Conference, Touro-Infirmary, 10:30 to 11:30 A. M.

DECEMBER 5 Physiology-Pharmacology Journal Club, Richardson Memorial, 4 to 6 P. M.

DECEMBER 5 ORLEANS PARISH MEDICAL SOCIETY—Annual Stanford E. Chaille Memorial Oration, 8 P. M. Dr. J. M. Mason of Birmingham will be the Orator.

DECEMBER 7 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

DECEMBER 8 ELECTION OF OFFICERS FOR 1935, ORLEANS PARISH MEDICAL SOCIETY. BALLOTING FROM 10 to 12 A. M.; 2 to 5 P. M. and 7 to 8:30 P. M. 1430 Tulane Avenue.

DECEMBER 12 Clinico-Pathological Conference, Touro Infirmary, 10:30 to 11:30 A. M.

DECEMBER 12 Physiology-Pharmacology Journal Club, Richardson Memorial, 4 to 6 P. M.

DECEMBER 12 Touro Infirmary Staff, 8 P. M.

DECEMBER 14 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

DECEMBER 14 French Hospital Staff, 8 P. M.

DECEMBER 17 Hotel Dieu Staff, 8 P. M.

DECEMBER 18 Charity Hospital Medical Staff, 8 P. M.

DECEMBER 19 Clinico-Pathological Conference, Touro Infirmary, 10:30 to 11:30 A. M.

DECEMBER 19 Physiology-Pharmacology Journal Club, Richardson Memorial, 4 to 6 P. M.

DECEMBER 19 Charity Hospital Surgical Staff, 8 P. M.

DECEMBER 20 Eye, Ear, Nose and Throat Club, 8 P. M.

DECEMBER 21 Pathological Conference, Hotel Dieu, 11 A. M. to 12 Noon.

DECEMBER 21 I. C. R. R. Hospital Staff, 12 Noon.

DECEMBER 21 Mercy Hospital Staff, 8 P. M.

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During the month of November the Society held two meetings. November 12 a joint Clinical Meeting of the Orleans Parish Medical Society with the Charity Hospital Staff was held in the Miles Amphitheatre, Charity Hospital. Interesting cases were presented and discussed by the members.

November 26 a regular scientific meeting was held. The following program was presented:

The Use of Evipal as an Intravenous Anesthetic —Ey Dr. J. Ross Veal and by invitation Drs. A. S. Hamilton and C. L. Farrington.

Breast Feeding with Especial Reference to Some of its Problems—By Dr. Ludo von Meysenbug. Discussed by Dr. Robert A. Strong.

Moving Pictures of the Normal and Pathological Larynx—By Dr. Francis E. LeJeune.

Delegates to the Louisiana State Medical Society were elected at this meeting.

Nominations for officers for 1935 were handed in to the Secretary in accordance with the By-Laws. Election of these officers will be held Saturday, December 8, 1934 in the office of the Society, 1430 Tulane Avenue. Balloting shall take place between the hours of 10:00 A. M. and 12 Noon; 2:00 to 5:00 P. M.; and 7:00 to 8:30 P. M. ONLY MEMBERS WHOSE DUES FOR 1934 ARE PAID ARE ELIGIBLE TO VOTE. SEND IN YOUR CHECK AT ONCE.

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During November several members of the Society have been honored; Dr. John H. Musser was chosen vice-chairman of the Medical Education Section of the Southern Medical Association.

At the Annual Meeting held in Boston on the evening of Thursday, October 18, 1934, Dr. Emmett Lee Irwin of New Orleans was elected a member of the Board of Governors of the American College of Surgeons for a term of two years expiring with the Annual Meeting in 1936.

Dr. Edward S. Hatch was elected President of the Clinical Orthopedic Society at its annual meeting held in St. Louis, November 9 and 10. This organization was started December, 1912.

The following doctors from New Orleans attended the Southern Medical Association meeting in San Antonio, Texas:

Drs. C. C. Bass, Chas. J. Bloom, W. R. Buffington, Wm. B. Clark, Chas. E. Craig, Isidore Cohn, L. R. DeBuys, Homer Dupuy, Chas. W. Duval, B. G. Efron, E. C. Faust, Peter Graffagnino, E. S. Hatch, E. Harold Hinman, J. K. Howles, Chaille Jamison, H. W. Kostmayer, E. H. Lawson, Francis E. LeJeune, Howard Mahorner, Geo. A. Mayer, John H. Musser, Alton Ochsner, J. T. O'Ferrall, J. A. O'Hara, Neal Owens, J. N. Roussel, T. B. Sellers, L. C. Scott, H. Vernon Sims, H. Theodore Simon, Sidney K. Simon, Daniel N. Silverman, Robert A. Strong, Roy H. Turner, M. T. Van Studdiford, Emmerich von Haam, Wm. A. Wagner, and R. M. Willoughby.

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## DEBT MORATORIUM

The new debt moratorium, as proposed, is not an automatic extension or suspension of ordinary debts. Present debts can be collected, as in the past, *unless* the debtor takes advantage of the new law, and applies to an officer created by the act, termed the "debt commissioner," for a stay, during which stay the debt cannot be collected under legal process. Of course, the act provides for the

suspension of proscription under the situation given.

The act will not apply to debts incurred after the law becomes effective.

If a creditor lets a debt now owed become proscribed, under the impression that it is suspended, or extended, by the new law, he will lose his right to collect anything. Proscription is not suspended automatically. Therefore suits must be entered to force payment. If the debtor does nothing, you can proceed. If he stops you with an order of the commissioner, things remain in the status quo for the period ordered. Many laymen will consider the extension automatic, until they find themselves sold out under judgments. If the creditor is lax, he will lose his right of action.

The above is an explanation of House Bill No. 2, as proposed at the Special Session of the Legislature held in Baton Rouge, during the week of November 10, 1934.

Since the passage of the above law, THE CREDIT & COLLECTION BUREAU of the Orleans Parish Medical Society is forwarding this information to the membership for its guidance.

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## TREASURER'S REPORT

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| ACTUAL BOOK BALANCE, 9-30-34 | $ 818.13 |
| OCTOBER CREDITS | 341.25 |
| TOTAL CREDITS | 1,159.38 |
| OCTOBER EXPENDITURES | 506.62 |
| ACTUAL BOOK BALANCE 10-31-34 | $ 652.76 |

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## LIBRARIAN'S REPORT

During October, 25 books have been added to the Library. Of these 8 were received from the New Orleans Medical and Surgical Journal, 8 by binding and 9 by gift. A notation of new titles of recent date is given below.

With October 1, the evening hours of opening have been resumed in the Library for Reading Room use. A gratifying response in attendance witnesses the appreciation of the profession for this feature of library service. The Library is open from 7-11 P. M., Monday through Friday nights each week.

Members of the staff have collected material on the following subjects during the month, at the request of physicians:

Sphenopalatine neuralgia.
Wisconsin Alumni Research Foundation.
Nausea.
Dangers from hypodermoclysis.
Hemostatics.
Intestinal sand.
Thytuitary.
Caruncles and cysts of Skene's gland.
Tumors of the urethra.
Geography of malaria.
Pleurodynia.
Preservation of urine.
Work of Chatterji on amebic dysentery.
Sauer's vaccine in whooping cough.
Manic depressive insanity.
Treatment of tuberculosis in the aged.
Orbital cellulitis.
Migraine.
Pathology of heart disease.

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## NEW BOOKS—OCTOBER

Cushney, A. R.—Textbook of Pharmacology and Therapeutics. 1934.

Wiggers, C. J.—Physiology in Health and Disease. 1934.

Rypins, Harold—Medical State Board Examinations. 1933.

Worcester, Alfred—Hygiene for Freshman. 1934.

Gervais, A.—Medicine Man in China. 1934.

Stone, C. T.—Dangerous Age in Man. 1934.

Seymer, L. R.—General History of Nursing. 1934.

Smith, S. C.—That Heart of Yours. 1934.

Drummond, J. C.—Biochemical Studies of Nutritional Problems. 1934.

New England Heart Association—Cardiac Course. Nos. 1-20. 1930-33.

Martin, F. H.—50 Years of Medicine and Surgery. 1934.

Wellcome Research Institute—Exhibits at Chicago Exposition. 1934.

Stevens, F. L.—Fungi from Costa Rica and Panama. 1927.

Philadelphia Medical Society—Maternal Mortality in Philadelphia. 1931-33.

Association of Life Insurance Presidents—Proceedings. 1930.

American Neurological Association—Transactions. 1933.

Rockefeller Foundation—Annual Report. 1933.

Frederick L. Fenno, M. D.
Secretary.

# LOUISIANA STATE MEDICAL SOCIETY NEWS

## IMPORTANT NOTICE

According to the By-Laws of the Louisiana State Medical Society, dues for the fiscal year of 1933 are now due. Secretaries of the various Parish Medical Societies should begin at once to collect the annual State dues of $6.00 from its members for 1935, and remit as promptly as possible to the Secretary-Treasurer at 1430 Tulane Avenue, New Orleans. Any members from unorganized parishes are requested to send their dues to the Secretary of their District Medical Society.

In this regard we would like to call your attention to the fact that the protection under the Medical Defense of the State Society is only covered from the time that individual dues are received by the Secretary-Treasurer of the State Society. It is, therefore, urgent that these dues be remitted as promptly as possible in order that one may have full protection under our Medical Defense Act.

## RECENT F. E. R. A. RULING

The office of the Louisiana State Medical Society has had considerable inquiry from the doctors throughout Louisiana on the question of the position taken by the Federal Emergency Relief Administration of Louisiana assigning medical cases for professional care, and especially the question of emergency treatment. Letters written to the State Adminisrator brought the following answer:

"I think Section E, Page 4, Bulletin 7, fully answers your question. This section reads as follows:

" 'Medical care shall not ordinarily be authorized by relief administrations for conditions that do not cause acute suffering, interfere with earning capacity, endanger life, or threaten some permanent new handicap that is preventable when medical care is sought.'

H. J. Early,
Administrator."

We hope that the above will help to clarify the contentions which have arisen in the work throughout the State.

P. T. Talbot, M. D.,
Secretary-Treasurer.

## CENTENNIAL OF MEDICAL EDUCATION IN NEW ORLEANS

One hundred years ago the first lectures and instruction in medicine were given, inaugurating a century of medical education in New Orleans. The community and especially the medical profession are justly proud of the accomplishments of the past one hundred years and of their contributions to medical knowledge, medical science and medical education during this period.

The Orleans Parish Medical Society, which represents the organized medical profession of the city, has decided to celebrate that memorable event, with special ceremonies, in which official New Orleans and the public will participate.

An arrangement committee has been appointed and is actively engaged in making plans and arranging the program for the occasion. Details are to be announced later, but it can be stated that in general, it will consist of appropriate addresses by prominent citizens representing the city of New Orleans, the Medical Profession, and the School of Medicine of the Tulane University of Louisiana, the foundation for which was laid one hundred years ago.

The celebration will take place on Monday, January 7, 1935, at 8 P. M., in Dixon Hall at Newcomb College.

## SHREVEPORT'S 1934 FALL CLINIC

At the Charity Hospital on November 8 and 9, under the General Chairmanship of Dr. Arthur A. Herold, with Dr. Brooks C. Garrett acting as Vice Chairman, Dr. Dean H. Duncan as Treasurer, and Dr. Clarence H. Webb as Secretary, there was held a very successful series of clinics. Clinics were given by Dr. James S. McLester, President-Elect of the American Medical Association; Dr. Wm. D. Haggard, Past President of the American Medical Association; Dr. Willis C. Campbell, Past President of the American Orthopedic Association; Dr. John R. Caulk, Professor of Urology, Washington University; Dr. Horton R. Casparis, Professor of Pediatrics, Vanderbilt University; and Dr. John H. Musser, Regent and Past President, American College of Physicians, Professor of Medicine, Tulane University.

## NEWS ITEMS

The following members of the faculty of the Graduate School of Medicine of Tulane University attended the meeting of the Southern Medical Association held at San Antonio Texas, during the week beginning November 12, 1934:

Dr. H. W. Kostmayer, Dean, who presented a paper on "Inflammation of the Uterine Cervix";

Dr. Isidore Cohn, who addressed the group on "The Jaundiced Patient";

Drs. J. Raymond, E. C. Samuel, Charles J. Bloom, F. E. LeJeune, D. N. Silverman, Wm. A. Wagner, Thomas B. Sellers, Howard R. Mahorner.

Surgeon W. Y. Hollingsworth was relieved from duty at Marine Hospital, New Orleans, La. on November 1, and assigned to duty at Louisville, Ky. in charge of the Marine Hospital at that place.

Assistant Surgeon Ralph J. Mitchell was relieved

from duty at New Orleans Marine Hospital, about October 22, and assigned to duty at the Marine Hospital, San Francisco, Calif.

## INFECTIOUS DISEASES IN LOUISIANA

Dr. J. A. O'Hara, Epidemiologist for the State of Louisiana, has furnished us with the weekly morbidity reports for the State of Louisiana, which contain the following summarized information. For the forty-second week of the year ending October 20, the following diseases were reported in double figures: Thirty-six cases of syphilis, 35 of malaria, 32 of diphtheria, 26 of cancer, 25 of pulmonary tuberculosis, 16 each of pneumonia and scarlet fever, 13 of gonorrhea, 12 of measles, 10 of typhoid fever. During this week there was also reported 1 case of poliomyelitis from Natchitoches Parish, and 1 case of typhus fever and 1 of tularemia from other parishes. The next week which ended October 27 showed a marked increase in the number of cases of malaria, there being 63 listed. Other important diseases were 38 cases of diphtheria, 34 of tuberculosis, 31 of typhoid fever, 30 of syphilis, 25 of pneumonia, 22 of cancer, 16 of scarlet fever, 13 of septicemia, and 11 of whooping cough. The typhoid fever patients were 7 from Ouachita Parish and 6 from Assumption, with no other parish having more than 3 cases. Twenty-three cases of diphtheria were reported from Orleans Parish, and 1 case of poliomyelitis from East Baton Rouge Parish. For the next week, ending November 3, pneumonia led all other reportable diseases, there being 42 cases listed. Then followed 40 cases of malaria, 35 each of cancer and pulmonary tuberculosis, 31 of syphilis, 29 of gonorrhea, 21 of diphtheria, 16 of typhoid fever and 13 of scarlet fever. One case of poliomyelitis was reported from Orleans Parish, and 1 case of typhus fever from the same parish. For the last week for which reports are available, the forty-fifth week of the year ending November 10, there were reported 49 cases of malaria, 46 of pneumonia, 36 of cancer, 32 of syphilis, 31 each of tuberculosis and diphtheria, 25 of scarlet fever, 14 of gonorrhea, and 11 of typhoid fever. Two cases of leprosy were reported in this week, and 1 case of typhus. A case of poliomyelitis was reported in Calcasieu Parish. The listing of a case of poliomyelitis in each of the four weeks reported would indicate that this disease is epidemic at the present time, serving to warn doctors of the possibility that this condition may be present even without the frank signs of paralysis.

## HEALTH OF NEW ORLEANS

The Department of Commerce, Bureau of Census, reports that for the week ending October 13 there was a death rate of 15.9 in the City of New Orleans as a result of 147 deaths, of which 100 were in the white and 47 in the colored race. The infant mortality for the week was 83, slightly above the rate for the year 1933. For the following week, which ended October 20, the number of deaths had dropped to 130, divided 73 white and 57 colored, with a death rate for the two groups of 14.1, for the white race 11.1, and for the colored race 21.3. The infant mortality rate was 83, the high figures of which were due to the rate of 147 in negro infants. For the week ending October 27, the total deaths were only one more than in the preceding week. Seventy-eight of these deaths occurred in the white and 53 in the colored population, giving a death rate for the group as a whole of 14.2, for the white race 11.9, and for the negro 19.8. The infant mortality rate was only 70. The next week, which ended November 3, again found figures surprisingly close to those of the previous two weeks. There were 133 deaths in this week, divided 77 white and 56 colored. The total rate was 14.4, for the white 11.7, and for the negroes 20.9. The infant mortality rate was 114, again as always due to the very much higher rate in the negroes than in the white infants. There was a surprising jump in the death rate for the week ending November 10, 167 deaths being listed as a result of some undetermined cause. The death rate for this week was 18.1, due largely to the high negro rate of 25.0 as contrasted with the white rate of 15.3. The infant mortality rate was 108.

## AMERICAN MEDICAL ASSOCIATION MEETING

Application blanks are now available for space in the Scientific Exhibit at the Atlantic City Session of the American Medical Association, June 10-14, 1935. The Committee on Scientific Exhibits requires that all applications be filled out on the regular form and requests that this be done as early as convenient. Applications close February 25, 1935.

Persons desiring application blanks should address a request to the Director, Scientific Exhibit, American Medical Association, 535 North Dearborn Street, Chicago, Illinois.

## THE VAN METER PRIZE

The American Association for the Study of Goiter again offers the Van Meter Prize Award of $300 and two honorable mentions for the best essays on the subject of goiter provided they meet the standards of the award committee. The essays should be based on original research work on the subject of goiter, preferably its basic cause. The prize essay or its abridgement is to be presented at the annual meeting of the Association to be held in Salt Lake City, Utah, in June 1935.

Competing manuscripts should be in the hands of the Corresponding Secretary, W. Blair Mosser, M. D., Kane, Pa. not later than April 1st, 1935.

The first prize of $300 for the 1934 meeting was awarded to M. A. B. Brazier, Ph. D., B. Sc., London,

England, for her essay "The Impedance Angle Test for Thyrotoxicosis."

W. Blair Mosser, M. D.,
Corresponding Sectary.

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## "NOTHING NEW UNDER THE SUN"

DAN E. KELLY

Arthur Erisbane, Hearst's celebrated columnist, writing several days ago about a California physician bringing dogs back to life, as an experiment, after their hearts had ceased to function, and commenting on the possibility of medical science reviving human beings after their hearts have quit beating, regarded the experiment and the feat as something new.

This experiment, and its succesful conclusion, while novel and sensational, was conducted by Dr. E. B. Hands, Shreveport practicing physician, at Tulane University in New Orleans, 32 years ago to demonstrate that adrenalin is a valuable agent in all forms of collapse, and, while the California physician may have used a new method, Dr. Hands still is the pioneer in this field of experiment.

Using 17 dogs, the first five were employed by the Shreveport physician to show how far general anesthesia could be carried with resuscitation by saline infusion combined with inflation of the lungs and hypodermatic stimulation and, at the same time, to demonstrate and note the amount of chloroform and the time necessary to produce collapse, the chloroform being always administrated to the degree of profound anesthesia.

The second five dogs served to demonstrate how much more of the anesthesia could be administered and over how much longer a period before collapse would be produced when adrenalin was being given hypodermatically in small doses as indicated by the vascular tension.

The last seven dogs were handled in the same manner as the first five except that adrenalin was used with the saline solution and these seven cases proved conclusively that adrenalin-saline solution will resuscitate, given intravenously, after collapse from chloroform narcosis and after both respiration and circulation have come to a stop.

In three successful cases the dogs reacted slightly within the minute and breathed normally in less than two, with strong pulse, after 12 ounces of the adrenalin-saline solution had been used.

A full account of Dr. Hands' experiment, headed "Adrenalin in Collapse," his graduation thesis, was published in the "Tulane Phagocyte, in August of 1903, the year Dr. Hands was graduated from the university.

The article follows:

"Adrenalin in collapse, when the cause has not been sufficient to produce instant death by inhibition, seems to be mainly a paresis of vasomotor centers in the medulla and cord, causing a paralysis of the sympathetic system especially marked in the splanchnic area. As a result of paralysis, there is a relaxation of the involuntary muscles controlling the 'balance' of circulation, this causing a welling-up of blood in the abdominal viscera and an insufficient amount of blood is forced up to the heart. The heart cannot expand and contract without a certain amount of fluid entering its cavities and it is chiefly this extreme secondary condition which causes death.

"The heart may be compared to a steam pump; shut off the intake valve and the pump will stop with the steam still on. But with the heart, shuting off the intake valve shuts off the 'steam' also. The heart not only stops from its inability to expand and contract from want of fluid, but 'shutting off the intake' also shuts off the blood supply to the heart muscle and ganglia and to the vital centers of the medulla.

"When the heart stops solely for the want of blood, it is a simple matter to give it this necessity but, after this, when the 'steam' is beginning to shut off, something else is needed other than simply opening the 'intake valves.'

"From these pictures of collapse and from a comparison of the physiologic action of adrenalin, which produces just the opposite condition, increasing blood pressure and forcing too much blood up to the heart if given in a sufficient quantity, it seems that it is especially indicated in this condition as it is said to act both locally on the heart and blood vessels and generally on the vasomotor centers.

"In my experiments with adrenalin in collapse I have taken the severe form—that due to hemorrhage and prolonged anesthetization—as a type, as it can be produced in animals very easily for experimentation. The total number of dogs anesthetized to date in my experiments has been 17, dating back to November of 1902. The first five were used to demonstrate how far general anesthesia could be carried with resuscitation by saline infusion, combined with inflation of the lungs and hypodermatic stimulation, and at the same time to note the amount of chloroform and the time necessary to produce collapse, the chloroform being always administered to the degree of profound anesthesia.

"The second five dogs served to demonstrate how much more of the anesthetic could be administered and over how much longer a period before collapse would be produced when adrenalin was being given hypodermatically in small doses as indicated by the vascular tension.

"The last seven dogs were handled in the same manner as the first five except that adrenalin was used with the saline solution. The greatest danger in the chloroforming of dogs is in the first stage, which lasts half an hour on an average. Without

an exception the respiration ceased first in the condition of narcosis; disappearance of the pulse followed next and the heart continued to contract without the inflation of the lungs, from a period varying from a few seconds to ten minutes. After the induction of anesthesia, the dog's neck was shaved and the external jugular vein was exposed, opened and two and one-half per cent of the total quantity of blood was withdrawn. When infusion was to be used, a valve cannula was inserted and ligated in the vein so as to be ready for immediate use. This had to be done before the resuscitation was started as it would take several minutes to insert the cannula and the dog might be beyond all possibility of being revived by that time.

"The adrenalin-saline solution used was of the strength 1:256,000, i. e., 30 minims of a 1:1,000 solution of adrenalin chlorid were added to a pint of normal saline solution. The normal dose of adrenalin chlorid for a dog weighing 30 pounds is from 15 to 30 minims. Larger doses than this cause labored respiration from the great increase of blood pressure, the arteries feel tense, while the pulse is strong and regular. The maximum dose, 30 minims, was added to the quantity of salt solution indicated after blood letting.

"I will not tabulate each of the 17 cases, but will give only the result of the three different sets of experiments: In the first five dogs, there was not a single instance of resuscitation after the heart ceased. Two were revived before the heart ceased beating, but the three in which the heart was allowed to stop before resuscitation was attempted all died. The average amount of chloroform used in these cases was one and one-third ounces, and the average time of anesthetization was 65 minutes. A stethoscope was used over the heart for the pulse was imperciptible when respiration ceased.

"In the second lot of dogs—in which adrenalin given hypodermatically—both the quantity of chloroform and the time of administration were more than doubled. As much as one ounce of a one to a 5,000 solution of adrenalin was given in one case, in a dog weighing 26 pounds, before collapse was finally produced, four of chloroform being used in this case. All these dogs died for they were literally saturated with chloroform.

"The last seven cases prove conclusively that adrenalin-saline solution will resuscitate, given intravenously, after collapse from chloroform narcosis and after both respiration and circulation have stopped. In these dogs we were able to revive, we did it up to one minute after the heart had stopped but all attempts were failures after this time had elapsed. In the three successful cases, the dogs reacted slightly within the minute and breathed normally within two, with the pulse being good and strong, 12 ounces of the adrenalin-saline solution being used.

"Of course, this is but a limited amount of evidence concerning the resuscitation of animals after collapse from hemorrhage and chloroform narcosis, but so far as it goes, it proves that such resuscitation is possible and this fact adds great weight to the evidence that adrenalin is a valuable agent in all forms of collapse."

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ARMSTRONG, R. L., Pleasant Hill, Louisiana: Born in 1857. Graduated from the University of Louisville in 1879. Dr. Armstrong had practiced medicine in Pleasant Hill for fifty-two years. He was the son of Dr. Lawrence Armstrong, pioneer Pleasant Hill, La., physician. Dr. Armstrong died on November 3, 1934, from a heart attack.

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KELLY, JOHN LUTHER, Oak Grove, Louisiana: Born in 1882. Graduated from College of Physicians and Surgeons, Memphis, Tennessee, 1907. Dr. Kelly served 18 months overseas during the World War as a captain in the medical corps. He was well known in American Legion circles and was a special delegate to the recent Legion convention held at Miami. He was a member of the State Board of Health, The Tri-Parish Medical Society, and the Louisiana State Medical Society. Dr. Kelly was killed on November 7, 1934, when an automobile in which he was riding crashed head-on against a bridge near Rayville.

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## WOMAN'S AUXILIARY TO LOUISIANA STATE MEDICAL SOCIETY

Since the Louisiana Auxiliary is pledged to the support of our state fund for Indigent Physicians and their dependents, I believe you will find interesting this quotation from a Colorado report on a similar fund:

"A recommendation from our Board is to the effect that a part of every dollar received as Auxiliary dues shall be set aside for this Fund. Wives of members of the State Medical Society are eligible to membership in the Auxiliary by the payment of $2.00 annual dues. In localities where there is no county Auxiliary organiaztion, wives may become 'members-at-large' upon payment of $1.00 per year.

"County Societies are becoming interested in this work and are making plans to aid in building up the Fund. Every doctor's wife can help by joining the Auxiliary. Every doctor can help by getting his County Society to set aside part of its money for the Fund, and by remembering the Physicians Benevolent Fund in his will or by insurance. The plan has been successful in Pennsylvania, New Jersey, and other states."

I wish that every member of the Auxiliary would take the opportunity of reading the letter of Mrs. Robert E. Fitzgerald, the National Chairman of Press and Publicity, which appeared in the recent Bulletin of the American Medical Association, in reference to the stand that the medical profession takes on various economic problems confronting it today as exemplified by the new book by Dr. E. H. Ochsner on "Medical Economics." Would not every Louisiana Auxiliary profit greatly from as well as enjoy hearing one of her own physicians review at a meeting the book mentioned?

Mrs. Robert T. Lucas,
Chairman, Press and Publicity.

## MISSISSIPPI STATE MEDICAL ASSOCIATION NEWS

MERRY CHRISTMAS AND BEST WISHES FOR THE HOLIDAYS

To the Officers of Medical Societies:

As your officers are elected, please report them to your editor. And while electing officers, do not fail to nominate active members to serve as county editors. Your Journal depends on their efforts.

CALENDAR

SOCIETY MEETINGS

ALCORN COUNTY MEDICAL SOCIETY: Third Thursday of each month. Club Room of Ladren Hotel, Clarksdale, 7 P. M.

ADAMS COUNTY MEDICAL SOCIETY: Third Tuesday of each month, Natchez Hospital, 7 P. M.

CENTRAL MEDICAL SOCIETY: First Tuesday of each month, Robert E. Lee Hotel, Jackson, 7 P. M.

CHICKASAW COUNTY MEDICAL SOCIETY: Last Thursday of each month, Houston Hospital, Houston.

CLAIBORNE COUNTY MEDICAL SOCIETY:

CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY: Third Wednesday in March and fourth Wednesday in November, Clarksdale, 2 P. M.

CLARKE-WAYNE MEDICAL SOCIETY: No regular meetings except for election of officers. Called meetings for special sessions.

COAHOMA COUNTY MEDICAL SOCIETY: Second Wednesday of each month, Clarksdale Hospital.

DELTA MEDICAL SOCIETY: Second Wednesday of April and November, 2 P. M. Next meeting, Greenwood, April 10, 1935.

DESOTO COUNTY MEDICAL SOCIETY: First Monday of January, April, July and October, Hernando, 10 A. M.

EAST MISSISSIPPI MEDICAL SOCIETY: Third Thursday in February, April, June, August, October and December, Meridian, 3 P. M.

HARRISON COUNTY MEDICAL SOCIETY: First Wednesday of each month, King's Daughters' Hospital, Gulfport or Biloxi Hospital, Biloxi, 7:30 P. M.

HOMOCHITTO MEDICAL SOCIETY: Second Thursday of January, March, July and October, Natchez, 2 P. M.

ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY: Second Tuesday of each month, Elks Club, Vicksburg, 7 P. M.

JACKSON COUNTY MEDICAL SOCIETY: Second Thursday of March, June, September and December, Jackson County Hospital, Pascagoula, 7:30 P. M.

MONROE COUNTY MEDICAL SOCIETY: First Monday of each month, alternates between Aberdeen and Amory.

NORTH MISSISSIPPI MEDICAL SOCIETY: First Wednesday of October, January, April and July.

NORTHEAST MISSISSIPPI THIRTEEN COUNTIES MEDICAL SOCIETY: Third Tuesday of March, June, September and December, 1 P. M.

PIKE COUNTY MEDICAL SOCIETY: First Thursday of each month, McComb, 7 P. M.

SOUTH MISSISSIPPI MEDICAL SOCIETY: Second Thursday in September, December, March and June, alternates between Hattiesburg and Laurel, 3 P. M.

TATE COUNTY MEDICAL SOCIETY: Third Wednesday of each month, Senatobia, 8 P. M.

TRI-COUNTY MEDICAL SOCIETY: Second Tuesday in March, June, September and December, Wesson, Tylertown, Monticello or Brookhaven, 12:30 P. M.

WEBSTER COUNTY MEDICAL SOCIETY: Last Thursday of each month, Houston Hospital, Houston.

WINONA DISTRICT MEDICAL SOCIETY: December 18, 1934, Wisteria Hotel, Winona, 12:30 P. M.

MISSISSIPPI STATE HOSPITAL ASSOCIATION: Biloxi, May 13, 1934.

**MISSISSIPPI STATE MEDICAL ASSOCIATION: Biloxi, May 14, 15, 16, 1934.**

MEMBERSHIP

Below is given the membership of the societies composing the Mississippi State Medical Association as of November 1. The membership on the same date last year is also given and the gain or loss indicated.

| | 1933 | 1934 | |
|---|---|---|---|
| Adams County | 22 | | |
| Central | 109 | 116 | Loss |

| | | | |
|---|---|---|---|
| Claiborne County | 6 | 6 | |
| Clarke-Wayne | 4 | | |
| Clarksdale and Six Counties | 55 | 44 | Gain |
| Delta | 116 | 87 | Gain |
| DeSoto County | | 8 | |
| East Mississippi | 79 | 85 | Loss |
| Hancock County | 4 | | |
| Harrison County | 44 | | |
| Harrison-Stone-Hancock Counties | | 37 | |
| Homochitto Valley | 17 | 35 | Loss |
| Issaquena-Sharkey-Warren Counties | 39 | 45 | Loss |
| Jackson County | 10 | 11 | |
| North Mississippi | 61 | 41 | Gain |
| Northeast Mississippi | 182 | 115 | Gain |
| Pike County | 26 | 28 | Loss |
| South Mississippi | 81 | 76 | Gain |
| Stone County | 2 | | |
| Tate County | 10 | 9 | Gain |
| Tri-County | 25 | 25 | |
| Winona District | 52 | 40 | Gain |
| TOTALS | 944 | 808 | Gain |

The figures given above were furnished by the secretary of the State Medical Association.

## ANNOUNCEMENT

It is an important announcement to the medical practitioners of this State to say that Dr. Maxwell E. Lapham has been selected as Clinical Instructor in Prenatal and Postnatal work which is to be conducted under the sponsorship of the Mississippi State Medical Association, and will begin January 1, 1935.

Dr. Lapham, aged thirty-four, graduated in medicine in 1925 at the University of Pennsylvania. He served two years in rotating internship at the Presbyterian Hospital of Philadelphia, spent five months in medical practice in Labrador; served as resident obstetrician at the University of Pennsylvania Hospital, and as instructor in obstetrics at the University of Pennsylvania, and now Dr. Lapham is back at the University of Pennsylvania for three months graduate work. Credentials of this kind are strong evidence of the adequate preparation the lecturer has for this important new work in Mississippi—a work that carries the "gospel" of scientific knowledge to the busy workman in the field of obstetrics.

Practitioners availing themselves of this opportunity for post-graduate work will be fortunate in having at their command a man so well qualified and equipped in this field of medicine. It is hoped that this service in review, instruction, and clinical demonstrations, and consultations will be fully utilized by busy practitioners in their endeavor to carry to the women of Mississippi a high state of efficiency in obstetrical services.

The organizer, Mr. Q. Edward Gatlin, began the organization of lecture circuits on November 1. The first circuit of courses will be in the following centers: Natchez, Centreville, McComb, Columbia, and Silver Creek. The complete course of ten lectures, clinics, and consultations will be given at each of these places. Dr. Lapham will lecture for one hour, then one hour or longer if necessary will be spent in conducting a clinic for the physicians present, and for informal discussion. The rest of the day in each center, Dr. Lapham will be available for consultation and individual work with any physician desiring his services.

This announcement and comment should not be brought to conclusion without saying that the Mississippi State Medical Association, at its May, 1934, meeting, proposed to undertake such a program and appropriated $1,500 toward the cost of the program for the first year and solicited the cooperation, financial and otherwise, of the Tulane Undergraduate and Graduate Schools of Medicine, the Mississippi State Board of Health, and the Commonwealth Fun of New York. All agencies having made the required appropriations, the program is ready to start—a credit to the initial step of the State Medical Association.

Again may we say that the medical profession of the State is fortunate in having this opportunity.

E. C. Parker, M. D., President,
State Medical Association
T. M. Dye, M. D., Secretary,
State Medical Association
H. W. Kostmayer, M. D., Dean,
Graduate School of Medicine,
Tulane University
C. C. Bass, M. D., Dean
School of Medicine, Tulane University
Leon S. Lippincott, M. D., Secretary
State Hospital Association
J. W. Lipscomb, M. D., President
State Board of Health.
Felix J. Underwood, M. D., Exec. Officer,
State Board of Health.

## LONGEST IN ACTIVE PRACTICE

In addition to those previously listed the following are reported as longest in active practice and still in practice in their respective counties:

JONES COUNTY—Dr. H. S. Tucker, Laurel, licensed 1882.

JASPER COUNTY—Dr. J. J. Tatum, Montrose, licensed 1883.

HINDS COUNTY—Dr. N. J. Milstead, Jackson, licensed 1886.

LAUDERDALE COUNTY—Dr. H. S. Gully, Meridian, licensed 1886.

NEWTON COUNTY—Dr. S. A. Majure, Hickory, licensed 1886.

KEMPER COUNTY—Dr. J. B. Mooney, Electric Mills, licensed 1890.

AMITE COUNTY—Dr. W. R. Brumfield, Gloster, licensed 1891.

PERRY COUNTY—Dr. E. J. Mathis, Beaumont, licensed 1891.

YALOBUSHA COUNTY—Dr. Manuel Winter Jackson, Water Valley, licensed, 1892.

LAMAR COUNTY—Dr. L. L. Polk, Purvis, licensed 1901.

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## MISSISSIPPI STATE BOARD OF EXAMINERS OF NURSES

The Mississippi State Board of Examiners of Nurses held its regular examination at the Robert E. Lee Hotel, Jackson, October 1 and 2, 1934. There were 85 applicants for registration by examination, 17 for registration by reciprocity. All applicants for examination made passing grades. The Balfour Plaque was presented to Miss Merle Gorden, from the Charity Hospital, Jackson, for highest grades during the year, general average 96¾ per cent.

Mrs. Alice W. Finley, R. N., Tupelo, was appointed on the board to succeed Miss Rose Keating, R, N., Jackson.

Officers for 1935 are Dr. Felix J. Underwood, president; Kate Lou Lord, R. N., secretary-treasurer.

Kate Lou Lord, R. N.

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## HOSPITAL STAFF MEETINGS

Anderson Infirmary, Meridian—First Friday of each month, 6:30 P. M.

Clarksdale Hospital, Clarksdale—Second Wednesday of each month, 1:30 P. M.

Grenada Hospital, Grenada—Third Tuesday of each month, 6:30 P. M.

George C. Hixon Memorial Hospital, Electric Mills—First Monday of each month, 7:30 P. M.

Houston Hospital, Houston—Last Thursday of each month, 7:00 P. M.

Vigsburg Hospital, Vicksburg—Second Thursday of each month, 6:30 P. M.

Vicksburg Sanitarium, Vicksburg—The tenth or during the week of the tenth each month, 6:30 P. M.

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## LOOKING BACKWARD

In looking over the Transactions of the Mississippi State Medical Association for the year 1893, I find only six of that membership who are living, —Dr. J. A. Crisler of Flora, now of Memphis, who was admitted in 1890; Dr. H. H. Haralson of Forest, now of Vicksburg, admitted in 1884; Dr. C. M. Murray, then and now of Ripley, admitted in 1890; Dr. Charles D. Mitchell of Pontotoc, now of Jackson, admitted in 1892; Dr. P. W. Rowland of Coffeeville, now of Oxford, admitted in 1883; Dr. W. H. Scudder, then and now of Mayerville, admitted in 1892. The last five named are still active members and we hope that they continue with us for years to come. The late lamented Dr. W. G. Kiger of Brunswick was the president; P. W. Rowland was elected second vice-president; H. H. Haralson recording secretary. There are 24 names listed as delegates to the A. M. A., including Drs. Rowland and Crisler. The meeting was in Jackson, the invocation was by the Rev. A. F. Watkins and the address of welcome by Mr. C. H. Alexander.

The address of President Kiger was strong and forward-looking. Of a list of honorary members only two survive, W. A. Evans, Jr., M. D. of Chicago and J. L. Minor, M. D., of Memphis.

The local essayists were besides President Kiger, Drs. J. M. Buchanan, M. J. Lowry, Frank D. Smythe, H. A. Gant, E. L. McGehee, Henry Isard, J S. Shackelford, W. S. Sims, N. L. Clarke and W. H. White. The out-of-state essayists were Drs. W. B. Rogers, A. B. Holder, T. J. Crafford and A G. Sinclair all of Memphis. At this time Dr. Frank D. Smythe lived at Kosciusko but shortly afterward moved to Memphis where he became a surgeon of wide repute, he died about four years ago.

Looking over the list of members there are many familiar names; these have passed on but their progeny are carrying on.

L. L. Minor,
Councilor, Second District.

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## AN OPENING

I have an opening here for a general practitioner to take up the practice vacated by R. R. Halfacre, who was appointed on the staff of the Mississippi State Hospital.

The town of Sumrall has a population of more than a thousand people, is surrounded by more than a thousand small farms within a radius of ten miles of town, which consist of another three or four thousand people. Have good deep water, electric lights, one of the largest consolidated school systems in South Mississippi, which consists of forty teachers, twenty school busses and around seventeen hundred educable school children in the school district.

I have a suite of nice offices in connection with my brick drug store with front door leading on the main street and a side door leading into the drug store which I propose to furnish free with the exception of lights and water.

My hands are not tied and I am under no obligation to any other doctor which gives me a free hand to get behind a new doctor who comes here

and boost him 100 per cent to my friends who are calling on me daily to locate a doctor here.

The Home Drug Store,
By W. Cabe Cowart.

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MEDICINE IN 1887

(From the Transactions of the Mississippi State Medical Association at the Twentieth Annual Session, held at Jackson, April 20, 21 and 22, 1887.)

Erysipelas (Abstract)—W. A. Galloway, Jackson.

Over two hundred years ago bacteria were discovered, but it was not, until within a few years, that the existing theory, which asserts that every infectious disease depends directly upon a specific organic form, was advanced. I propose not the defense nor attack of the parasitic theory of infectious diseases.

While it is somewhat fanciful in its conception, it is a beautiful theory, and it is to be hoped that it will live a long and useful career, but whether we accept the germ theory or not, we must, in order to have one upon which we can stand without apology, accept that which supposes a specific virus to be the true cause of erysipelas.

The following from the pen of a distinguished English authority will show that sewer-gas is sometimes, if not invariably, productive of erysipelas. He says: "There is now no more doubt that erysipelas is originated by sewer-gas than that typhoid fever is more often than not due to impure drinking water."

Many recent authors contend that remedial agents are of little or no avail in this disease.

Never having seen the disease prevail in a malignant epidemic form, I am not prepared to controvert the proposition in toto; but as it prevails in this country, they are unquestionably mistaken.

In the course of my professional life I have met with the disease frequently, and in various forms of gravity, but have never known a person to die with erysipelas.

My treatment has been partly of the old orthodox plan—a mercurial purge followed by quinine to control high fever, and the free administration of iron. There can be no doubt that quinine and iron have been of great benefit in this disease. But while we are giving our constitutional remedies, the local inflammation is making great ravages on the patient. What will control it? A cranberry poultice.

If it is impossible to obtain the cranberries, tomatoes, fresh if possible, will answer as a substitute.

I have seen the inflammatory process controlled in from six to twelve hours by means of these poultices, where it would have gone on from bad to worse. I cannot explain by what means, or what chemical action it exerts in the control of the inflammatory action, but I do know that the erysipelas inflammation has always yielded in a magical manner to the cranberry poultice.

The alleviation and control of the local inflammation lessens the constitutional disturbance, thereby giving opportunity for the prosecution of your constitutional remedies. So that, if we have in the cranberry, an agent that will stay the tide of the great destroyer, another boon has been given to humanity, and unnumbered thousands, yet unborn, will bless the science of medicine and the noble profession to which we belong.

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A CASE OF OVARIOTOMY, PRESENTING SOME FEATURES OF INTEREST. (Abstract).—W. F. Hyer, Holly Springs.

The first object of interest in this case was the fact that she was a full-blooded negro. I have investigated her family history for three generations and find no suspicion of the admixture of Caucasian blood. It is a mooted point with many pathologists as to whether a negro can have an ovarian cystic tumor. I think it was Dr. Marion Sims who first originated the idea, and as a general thing ovariotomists hold to it unfalteringly to this day. Let me quote on this subject from a discussion in the Baltimore Gynecological and Obstetrical Society, reported in the Medical and Surgical Reporter of Philadelphia (Brinton's), page 172, August 7, in 1886:

"Dr. H. P. C. Wilson said that he was absent at the last meeting of the society, when Dr. Chunnis paper, describing the removal of an ovarian tumor from a negro woman was under consideration.

"As this operation was done at the Hospital for the Women of England, under his service, and by his assistant, he would be considered as endorsing the correctness of the case as reported should he hold his tongue. He now rose to protest against this case going on record as an ovarian tumor in a negro woman. It was clearly to his mind a tumor of the uterus.

"Although he had examined a great many negro women, he had never seen an ovarian tumor in one. He had consulted a great many physicians on this point, and had never found one who had seen an ovarian tumor in a negress. He had never heard or read of this kind of tumor being found in the African race. Dr. Atlee mentioned such a tumor in a woman three-fourths white; she certainly was not a negress."

You will, therefore, see, gentlemen, that it is considered something rare to see a negro woman with an ovarian cyst and doubtless in certain quarters, the accuracy of my diagnosis may be questioned, but I present you with the specimen today, which is so perfect as will silence all who may question the record. The fact is that negroes are probably

more subject to this trouble than is supposed, but they are ignorant and poor—unable to go to the large centers of population for relief, and are deprived of hospital privileges at home, there being no hospitals in the rural districts where they generally congregate.

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### CLARKSDALE AND SIX COUNTIES MEDICAL SOCIETY

The Sixty-fifth Semi-annual Session of the Clarksdale and Six Counties Medical Society was held at Clarksdale on Wednesday, November 14. The program as announced by Dr. E. LeRoy Wilkins, acting secretary, was as follows:

Afternoon Session, Elks Club, 2.30 p. m.

Business Session—Payment of Dues; Election of Officers for 1935.

Scientific Session:

Presidential Address—L. H. Brevard, Dundee.

Our Greatest Curse: Purgation.—Dr. J. D. Biles, Jr., Sumner.

Trends in Medicine and Public Health—Dr. F. J. Underwood, Jackson.

A Typical and Border Line Hyperthyroidism—Dr. J. A. Crisler, Jr., Memphis, Tennessee.

Banquet, 7 p. m., Alcazar Hotel.

Speaker—Dr. J. R. Hill, Corinth.

Entertainment.

There will be further discussion of the merger of this, and the Delta Societies at this meeting.

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### ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

A regular monthly meeting of the Issaquena-Sharkey-Warren Counties Medical Society was held at the Elks Club, Vicksburg, November 13. After a supper at 7 p. m., the following program was carried out:

1. Clinical Case for Discussion and Diagnosis—Mesenteric Thrombosis.—Dr. W. E. Johnston.

2. Tuberculosis:

Introduction by the Chairman.—Dr. F. Michael Smith (Read by Dr. L. J. Clark.) A general discussion by all present.

The annual meeting of the Society will be held at the Elks Club, Vicksburg, Tuesday, December 11. The speakers will be Dr. W. R. Buffington, Professor of Ophthalmology, Tulane; Dr. P. H. Jones, Jr., Department of Medicine, Tulane; Dr. Ambrose H. Storck, Department of Surgery, Tulane. A special invitation to be present has been extended to all of the officers of the Mississippi State Medical Association and the Louisiana State Medical Society. A general invitation will be extended to all of the members of the two associations.

At the November meeting, President W. H. Scudder appointed a nominating committee consisting of Drs. L. J. Clark, for Warren County; J. B. Benton, for Issaquena County; and W. C. Pool, for Sharkey County. Election of officers will take place at the next meeting.

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### ADAMS COUNTY

Dr. Lucien S. Gaudet attended the Southern Medical Association meeting in San Antonio, Texas.

Recent reports are that Dr. Raymond T. Smith, now at Fort Smith, Arkansas, is improving from his recent severe illness. Let us all hope he will soon be in perfect health once more.

Dr. and Mrs. Lucien S. Gaudet recently visited St. Louis and Chicago. While on his trip, Dr. Gaudet visited several clinics.

Dr. and Mrs. Philip Beckman have returned from Kansas City. Both feel much benefitted from their trip.

Lucien S. Gaudet.

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### AMITE COUNTY

You have really caught me this time. I have to confess I am the oldest practitioner in this (Amite) county, having been licensed after graduation in 1891.

Don't give me up. I am going to write something for the Journal some time.

W. R. Brumfield.

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### COAHOMA COUNTY

As near as I can find, Dr. J. W. Gray, of Clarksdale is the oldest practicing physician in our county.

James William Gray—Born April 16, 1865, in Marshall County, near Holly Springs. Graduated, University of Louisville (Ky.), 1890 but licensed in 1889. Practiced at Myrtle for two years, moving to Clarksdale, August 25, 1890. Married Miss Margaret Roberts of Holly Springs, December 4, 1891 To them were three children, J. W. Jr., and Agnes (Gaines) now living, a daughter dying at age of one. Member and loyal supporter of organized medicine and served as president of the Mississippi State Medical Association, 1908-09.

Am enclosing program of the next meeting of the Clarksdale and Six Counties Medical Society, which meets next Wednesday.

E. Leroy Wilkins.

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### DESOTO COUNTY

Dr. Charles Whitley Emerson, Hernando, Mrs. Emerson's father; Dr. L. W. Dotson, West Point, and some friends report a wonderful fishing trip on the Gulf. The doctor is getting to be a regular disciple of Izaak Walton.

The William P. Warfield, Jr., who was born and reared in Tunica, after completing his acedemic,

medical, and hospital courses, has located in his home town. He is asociated with Dr. W. H. Williams. L. L. Minor.

GRANADA COUNTY

Grenada General Hospital staff meetings are held on the third Tuesday of each month at 6:30 p. m. We held our first meeting on September 18 at which time our officers were appointed, namely: Dr. R. A. Clanton, President, and Dr. F. S. Hill, Secretary. Our next meeting was held October 16. Meetings are held at the hospital and a delightful dinner is served after which we have most interesting programs. J. K. Avent.

HINDS COUNTY

The oldest active practitioner of medicine in Hinds County is Dr. N. J. Milstead. Dr. Milstead has been in active practice 48 years and the wonderful part of it all is that he has never missed a day from practice on account of his own illness. His long time in practice is not due to lack of work either. The office hours of Dr. Milstead, according to the telephone directory of this city, are from 5 a. m. to 11 a. m., 12 noon to 7 p. m.

The staff of the Baptist Hospital held its regular meeting the third Thursday of October. There was a good attendance to enjoy the splendid meal serveded and the program.

The staff of the Jackson Infirmary held its regular meeting October 30. A good dinner and program was greatly enjoyed by about 35 doctors.

The Central Medical Society met Tuesday evening, November 6, at the Robert E. Lee Hotel. After dinner was served we had the following program: Diagnosis of Non-Specific Urethritis, by Dr. J. Rufus Johnson; and Irradiated Vitamin D. Milk, by Dr. Henry T. Summa, Wisconsin Alumni Research Foundation, Madison, Wisconsin.

A number of doctors from Hinds County are going to San Antonio for the meeting of the Southern Medical Association.

Wm. F. Hand.

ISSAQUENA COUNTY

Dr. W. H. Scudder, Mayersville, is the oldest doctor in Issaquena County in point of years as well as in the practice of medicine.

He was graduated from the Louisville Medical College in 1887, was licensed and began the practice of medicine at Mayersville in April of that year, and has been here ever since.

He joined the State Medical Association at Natchez at the April, 1892 meeting, and is the only living member of the old Yazoo-Delta Medical Society, organized in Greenville several years later.

W. H. Scudder.

JASPER COUNTY

Dr. J. J. Tatum of Montrose is the oldest doctor in our county. Born December 29, 1859; entered college, 1882 in Louisville, Ky., but gradutaed at University of Alabama, Mobile, 1883. Years of practice, 51.

Dr. J. B. Thigpen and sons, Joe, Jr. and Jarman, visited son and brother in Abilene, Texas recently.

Dr. G. W. Land, Louin, and W. C. Simmons, Bay Springs, anticipate attending the S.M.A. meeting in San Antonio, Texas.

J. B. Thigpen.

JONES COUNTY

I have read with interest your list of physicians in Mississippi who have been longest in the service but feel sure that the list I am sending in will not be surpassed or equalled by any county in Mississippi.

(1) Dr. H. L. Tucker, Laurel, graduated from Tulane, 1887, but had practiced two years before graduation. The doctor is still hale and hearty and going strong.

(2) Dr. J. R. Kittrell, Laurel, graduated from University of Tennessee, 1895. Dr. Kittrell is still very active.

(3) Dr. W. N. Blount gradutaed from University of Louisville, School of Medicine, 1894. Doing active practice.

(4) Dr. J. B. Jarvis, graduated from Memphis Hospital, 1893. Dr. Jarvis is very active and says he can outrun any doctor in Mississippi.

(5) Dr. M. W. Waldrup graduted from Louisville Medicl College, 1891. He is still very ctive

(6) Dr. C. H. Ramsey graduated from Emory University, 1902. Still active.

(7) Dr. N. B. Smith graduated in 1894. He lives in Ellisville. Dr. Smith is still practicing but is incapaciated to a certain extent due to a foxy heart.

Drs. C. H. and Tom Ramsey are occupying their new offices in the Pinehurst Hotel building. Their offices are modern in every respect, consisting of large spacious waiting room, well furnished, with a private office and treatment room for each of the doctors; one emergency ward with two beds to take care of emergency patients, with laboratory and supply room.

Dr. Tom Ramsey resigned as house surgeon at the South Mississippi Charity Hospital and he will devote his entire time to private practice. He is associated with his father, Dr. C. H. Ramsey. Dr. Ramsey's place has not been filled at the hospital as we understand, but Dr. L. Golden of Laurel, is devoting part of his time to the hospital.

The many friends of Dr. A. J. Carter, superintendent of the South Mississippi Charity Hospital, sympathize with him in the loss of his mother whose death occurred at Gloster the earlier part of the month.

Drs. Joe Green and R. T. McLaurin are now occupying their new offices at the Masonic Clinic Building just across from the Laurel General Hospital. The building is furnished throughout with masonite. Besides the waiting room, each doctor has a private office and treatment room; also one room equipped with two beds to take care of emergency patients. There is a room which is used for the laboratory and colored waiting room; one room that has been furnished and will be occupied by the nurses on the staff, namely: Misses Willie Ray Carter and Adillia Meadows. The bath room and laboratory are adjoining the nurses' room.

In our last report I find we failed to record the recent death of Dr. J. W. Stringer of Taylorsville. Dr. Stringer was active up until the time of his last illness and enjoyed a large practice in Smith and adjoining counties. He will be missed by friends as well as his family.

Dr. R .T. McLaurin spent Friday and Saturday, November 9 and 10, in New Orleans as the guest of Dr. Eugene Vickery. They were going to try to scare some ducks.

Dr. J. K. Oats is again in his office since a recent illness. Dr. Oats is a well known physician throughout this country as well as one of our active surgeons but when he went down with the stomachache himself he did not have anyone see him except some general practitioner who would not operate. However, the Dr. is o. k. again.

Miss Emma Easterling, assistant superintendent of the Laurel General Hospital, is again on duty after a six months' course in anaesthetist in the Memphis Hospital. This gives the hospital two graduate anaesthetists which will be a great asset to both the hospital and the doctors.

The writer is able to be in his office after a thirty days' illness part of which time was spent in the Baptist Hospital in Jackson and Touro Infirmary in New Orleans and the balance of the time at home in bed. At one time it looked as if Joe Green's program was all over, but at this time I am glad to say that I am feeling much better and believe I will entirely recover. However, I want to drop a word of advice to you doctors who have the habit of sitting on the side of the bed and letting the mother put her knee against your shoulder during the hours of confinement. You better watch your step because it came very near getting me.

Joseph E. Green.

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LAFAYETTE COUNTY

Dr. and Mrs. Little and Dr. B. S. Guyton of Oxford, will attend the Southern Medical Association meeting at San Antonio.

The next meeting of the North Mississippi Medical Society will be held at Water Valley during December, 1934.

A. H. Little.

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LAMAR COUNTY

Dr. J. R. Anderson of Sumrall has practiced in the county since June, 1902. Dr. B. D. Stevenson of Lumberton has practiced in the county since June, 1905.

Dr. S. E. Rees of Purvis, has practiced in the county since 1903.

Dr. L. L. Polk of Purvis has practiced in this county since June 1900, under Dr. E. H. Carraway the first year, so I am the oldest practicing physician in the county.

Mrs. Polk and I are leaving Sunday morning for the meeting of the Southern Medical Association by car by way of New Orleans and Old Spanish Trail. I expect to go deer hunting after meeting is over.

L. L. Polk.

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LAUDERDALE COUNTY

The following doctors will leave Meridian, Sunday, November 11, to attend the meeting of the Southern Medical Association at San Antonio, Texis: Drs. T. D. Boudreaux, M. L. Flynt, Karl O. Stingily and F. G. Riley.

Dr. F. G. Riley's Hospital has installed the new McKesson's electric-oxygen tent.

F. G. Riley.

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LAUDERDALE COUNTY

Dr. H. S. Gully of Meridian has been in active practice longer than any other doctor.

Dr. W. Jeff Anderson will attend the meeting of the Southern Medical Association to be held in San Antonio.

Hazel Jones.

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LEFLORE COUNTY

Dr. L. A. Barnett, county health officer, and Mr. Nelson H. Rector, chief engineer, malaria control, State Board of Health, addressed the Itta Bena Rotary Club, October 3, on malaria control.

Dr. and Mrs. G. G. Dowdall, Chicago, spent the week-end October 6 and 7 in Greenwood at the Hotel Irving with friends.

Dr. J. E. Dunlay, Schlater, attended the World's Series at St. Louis.

Dr. and Mrs. C. J. Pittman, Ruleville, visited in the home of his siister, Mrs. W. M. Loyd, Greenwood, October 7.

Dr. B. B. Harper, Itta Bena, visited Memphis on October 10.

Dr. H. P. F. Burbage, Meggett, S. C., was in Greenwood recently examining boys for the C.C.C. camps.

Dr. and Mrs. H. T. Ashford, Clinton, were seri-

ously injured in an auto wreck near Jackson. They were treated in a hospital at that place. Dr. Ashford came to Greenwood to remain during his convalescence, in the home of his sister, Mrs. R. E. Denman, his wife remaining in the hospital.

Drs. Edgar Giles, Avalon, and E. R. Shurley, Money, were also seriously injured when, returning from the meeting of the Delta Medical Society at Greenville, October 10, their car collided with a parked car without lights, on the highway near Greenwill. They were taken to Memphis to the Campbell Clinic. Dr. Giles had a broken nose, arm and several ribs; while Dr. Shurley had a fractured left femur and concussion of the brain.

Dr. George Baskervill visited relatives at Alexandria, La., October 27 and 28.

Dr. John F. Lucas, Greenville, passed through Greenwood, October 31 on his way to New Orleans.

Dr. and Mrs. R .B. Yates, Greenwood, went to New Orleans to spend a few days with their daughter Marjorie, at Newcomb College. They will visit the Gulf Coast before returning.

Dr. L. Q. Hall, Jackson, also Dr. and Mrs. J. W. Barksdale, Jackson, were recent visitors to relatives and friends in Greenwood.

Mrs. J. D. Sweaney, Minter City, wife of Dr. J. D. Sweaney, was injured in a car wreck near Charleston, November 3. Her injuries were slight.

Rev. J. R. Hughes, first pastor of the Baptist Church, Greenwood, died October 31 at the home of his son, Dr. T. G. Hughes, Clarksdale, and was buried in Greenwood from the First Baptist Church on November 1.

Eugene Murphy, 14, Itta Bena, grandson of Dr. E. M. Murphy, Macon, died at Macon, November 3 of leukemia. He was buried November 4 at his home in Itta Bena, where his father is Superindent of citiy schools.

W. B. Dickens.

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## MONROE COUNTY

Each of the four seasons of the year is glorious—each has its own special glory and beauty, but to me autumn has always held more charms than the others. And it seems to me that this autumn has been and still is the most glorious that I have ever seen. The weather has been wonderful. The crops are safely gathered—our farmers have planted their winter cover crops, and now that "the frost is on the pumpkin and the co'n pone is hot," it seems that their joy should be full indeed. It is true that the depression has left them badly crippled, but I think they have learned a new philosophy of life and they are beginning to see a rift in the dark cloud that has hung over them during the past four years. Diversified farming and close economy followed by a better price for their cotton and other produce have placed them on firmer ground. It is true that old debts still hang on to harass them and the crushing burden of heavy taxes has to be borne, yet "hope" still springs eternal in the human breast. I have always heard that while there is life there is hope. But I rather think that this saying might, well, be changed to "where there is HOPE life can be borne and enjoyed."

How glad I am that none of my doctor friends have died since my last communication. So far as I know all MY doctors have been well during the month just ended. Our county society met at Aberdeen last night November 5. It was a most delightful occasion. The very best fraternal feeling and spirit prevailed. Dr. Dixon reported a very interesting case in which leaking of cerebro-spinal fluid through the nose was a prominent symptom. It seems that something like a half pint per day is lost. Severe headache comes on at frequent intervals and by bending over the fluid can be spilled and the headache relieved. It further appears that some years ago radical nasal surgery was done and radium used later. Portions of the pituitary were removed by one of the nation's most outstanding brain surgeons. It was not certain that the condition for which this operation was done was diagnosed as cancer or not. However, the discussion of the case reported led to a discussion of the use of Coley's toxin in malignancy, especially in sarcomatous conditions. Your correspondent has recently had some correspondence with Dr. W. B. Coley and he furnished me with a large number of his most recent publications on the subject. He writes me that he has long been of the opinion that cancer of all kinds is caused by an unknown micro-organism. Of course we all know that Sir James Paget, more than fifty years ago, called attention to the fact that cases of cancer recovered after the victim had gone through an attack of erysipelas, and that Dr. Coley as far back as 1893 reported regressions (possibly cures) following the use of his B. prodigiosus and erysipelatus combined. We are, also, aware that the council on drugs and remedies has readmitted this preparation to the list of N. N. R. There can be no room for doubt that authentic cases of inoperable cancer have been cured (if it can be said any such cases have ever been cured) by the use of this toxin. But the thing I can not understand is why, if it can cure INOPERABLE cases, it will not cure the early or operable cases. But there are many things that I can not understand. But I must not allow myself to get going on this subject; for it must be held sacred for big men, only. Still, I hold that it should not be held a crime for us little felows to think our own thoughts and not wait for them to be ladled out to us by the great (and near great).

I wish I could advertise to the world-at-large the place for the December meeting of our society, but it has not yet been made known by our secre-

tary, Dr. Acker. And in closing, permit me to say that Dr. Acker had made us the best secretary any society has ever had. How we hate to give him up in that capacity. We have plead with him to continue to serve us, but he says he can not do so because of the heavy duties he has assumed at the hospital. We know that he wants to continue to serve us—so we shall have to take the wish for the service. But we do want him to know that we appreciate him more than words can tell.

G. S. Bryan.

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NEWTON COUNTY

After some little effort I am enclosing you replies from two doctors in our county whom I thought entitled to the honor of longest time in active practice: Dr. S. A. Majure, Hickory, and Dr. S. B. Henton, Decatur, and from the data which is enclosed in would seem Dr. Majure is the senior, even though he does not covet the honor.

Dr. Henton is still doing a very extensive practice in and around Decatur, is on the governing board for charity fund distribution for our hospital and held in highest esteem in his community as well as the county at large. You will note he mentions "plenty of incidents in my life but no special nor outstanding ones," which we of the rural districts can well appreciate, such as riding a mule through cotton patches to see some destitute negro and making an obstetrical delivery with the only means of sterilization being a molasses bucket on an improvished stove on a cold, blustery night.

Very few things happening in our vicinity worthy of report. Newton will dedicate our airport, Monday, 12th inst., with quite elaborate ceremonies of which we are justly proud. Our staff doctors are directly connected with the entertainment program, some being under the supervision of the business men of the town and the American Legion.

We are always glad to contribute items whenever we can help as much as possible in your department. Whenever we can serve you, call on us.

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"Not quite sure but I think that Dr. S. B. Henton of Decatur is senior in the profession. My certificate was issued in April, 1886. I know he looks every inch of being the senior. Good wishes to your institution and its varied interest."

(Signed) S. A. Majure, M. D. Hickory

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"In answer to your request as to my school from which I graduated and at the time I finished.

"It was the Univesity of Alabama Medical College in the year of 1887. I started my practice in May of the same year, located in Lauderdale County, Miss., and came to Decatur in 1889, and have practiced at this place since that date, and took a special training course in New Orleans in the year of 1898. Since that time I have been active in practice at Decatur, my present home.

"I will say that my life has been a steady grind of the average small town country doctor. Plenty of incidents in my life but no special nor outstanding ones.

"Hoping this will meet your request, and give the information, I am now in my seventy-fourth year; born in 1861."

(Signed) S. B. Henton, Decatur
Mrs. Scottie Kemp.

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PONTOTOC COUNTY

The health of Pontotoc County is extremely good. Only a few cases of flu and malaria.

Pontotoc County Medical Societly met in Pontotoc November 6, with ten members present. A very interesting program was rendered.

The many friends of Dr. E. G. Abernathy of Algoma will regret to hear that he is confined in the Veterans Hospital at Memphis. We sincerely hope he will soon regain his health and be home again.

Two or three of our doctors expect to attend the meeting of the Southern Medical in San Antonio next week.

Hope to have more news next week.

R. P. Donaldson.

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WARREN COUNTY

Someone with a poetic vision speaks of life as "A narrow isthmus 'twixt two boundless seas, the past, the future, two eternities." Down this isthmus came life and a more compete revelation of all of life to Dr. and Mrs. R. A. Street, Jr., October 20, when to them was born their first child, Mary Elise. May the happiness attending the advent of this little one and the joy of caring for it during the early days when it is "ill-fitted to sustain unkindly shocks" abide with them through the years.

After a recent visit to Chicago by way of the Mayo Clinic, (en route or on return) (the route all good doctors take) we are advised that Dr. J. A. K. Birchett, Jr. has memories that come to him like "echoes from an antenatal dream" but they do not disturb Doctor Jack, for hideous thoughts find no abode within a pure and gentle mind.

The Empire State, and City of New York, had among its distinguished guests this month, Dr. and Mrs. Augustus Street, from Vicksburg. Dr. and Mrs. Street were accompanied by their little son, Bobby, who we opine will try to follow in the footsteps (some of them) of dear old Dad.

We speak not facetiously when we say that Dr. Nathan B. Lewis delivered an eloquent talk or address to the personnel of the local FERA administrative staff, for "true eloquence consists in say-

ing all that is necessary, and nothing but what is necessary."

We are told that Confucius wrote that, "Learning without **thought** is labor lost; **thought** without learning is perilous." Mindful of these apparent truths, Dr. Preston S. Herring of the Vicksburg Infirmary, is asking for a leave of absence that he may get away sometime in the month of November, to enter Washington University, St. Louis, for a few months' **thoughtful** study in internal medicine.

Dr. and Mrs. Laurence J. Clark are the proud hosts to a most noted celebrity who came as an abiding guest to their home and hearts at 9 a. m., November 2. in the person of a tiny little lady previously unknown to them. She is making her first visit and as they fondly and joyfully welcomed her they asked: "What is life" and her reply was, "Tis to be born." "A helpless baby, to greet the light with a sharp wail, as if the morn foretold a cloudy noon and night; to weep, to sleep, and weep again, with sunny smiles between; and then?"

The group of doctors of Vicksburg and Warren County who have definitely signifiel their intention to attend the S.M.A. meeting at San Antonio, Texas, are Drs. Edley Jones, Pierre Robert, Guy Jarratt, William Purks, and Old Mich Smith. They are shouting lustily, "On to San Antonio, the Alamo, and the Rodeo." In this Rodeo, the Thursday night "big show," we are definitely or indefinitely advised that these 'noted actors" will play a leading roll in this superb entertainment; Dr. Edley Jones will ride the "bucking broncho." Pierre Robert as a famed matador will fight the "wild man," Guy C. Jarratt will administer pasteurized milk and cod liver oil to the "little doggies," William Purks as "Senor" with his guitar will serenade the "Senorita," and old Mich Smith will endeavor to "show them the way back home" when all is over, "Over There."

H. T. Ims.

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### WASHINGTON COUNTY

Dr. and Mrs. Edwin Hamblen and little daughter, Agnes, of Durham, N. C., recently visited his aunt, Mrs. Julius Thompson, at Percy and Greenville relatives. Dr. Hamblen is affiliated with Duke Hospital at Durham.

Dr. and Mrs. T. B. Lewis, Greenville, made a week-end visit to their daughter, Mrs. James Franklin of Jackson.

Mrs. T. B. Lewis and Mrs. Charles Kittleman attended the executive board meeting of the National Council of State Garden Clubs Federation in Lexington, Ky. Mrs. Lewis stopped in Louisville, Ky., to visit her sister. Mrs. Lewis is president of the Greenville Garden Club.

Friends will be glad to learn that Ada Lee Davis, daughter of Dr. and Mrs. L. C. Davis, Greenville, who has been ill for the past four months, is reported doing nicely since her operation at the King's Daughters' Hospital, Greenville.

Dr. and Mrs. Thompson, Greenville, entertained at bridge the members of the Nite Bridge Club.

Dr. and Mrs. W. B. Lewis of Congo, Africa, have returned from a month of post graduate work at the Mayo Clinic. They will visit friends and relatives until the first of the year at which time they will return to Africa.

The many friends of Dr. and Mrs. J. A. Wadlington, Belzoni, regret to hear that Mrs. Wadlington is sick at the King's Daughters' Hospital in Greenville.

Dr. and Mrs. J. A. Beals, Greenville, are enjoying having her mother, Mrs. Mary D. Christian, of Noblesville, Ind., on a visit with them.

The many friends of Dr. and Mrs. J. C. Pegues, Greenville, are delighted to know that Mrs. Pegues has entirely recovered from an operation which was performed at the King's Daughters' Hospital, Greenville.

Curtis Smith, son of Dr. and Mrs. C. R. Smith, Drew, is sick at the King's Daughters' Hospital in Greenville. His many friends hope for an early recovery.

Dr. J. F. Lucas, Greenville, attended the meeting of the Central Society of Obstetricians and Gynecologists in New Orleans, Louisiana, which was held during the last week of October. Dr. Lucas was elected to fellowship.

Mrs. Paul Gamble, Greenville, has returned from a trip to Chicago, Ill.

Miss Virginia Witte, daughter of Dr. and Mrs. K. L. Witte, Leland, was one of those who taught in the Bible Study Course in West Point this past month.

Dr. John C. Archer, Greenville, had a most delightful trip to Miami, Florida, during October. He attended the American Legion Convention and reports glowing accounts of the convention.

J. G. Archer.

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### WINSTON COUNTY

Drs. L. T. Parks and C. A. Kirk of Fearn Springs, were in our city this week.

Dr. S. W. Pearson made a trip to Memphis last week with a patient.

The doctors of the city will begin a series of examinations today of all employees of the state cannery which will start up at an early date.

We are not in position to gather much news at this writing, as everything is quiet.

Dr. S. W. Pearson carried a patient to a Memphis hospital last week.

Dr. W. W. Parkes got news of his aunt's death at Philadelphia yesterday, Mrs. Luke Barriers, and will attend the funeral this P. M. at Philadelphia.

Dr. W. W. Parkes carried a patient to the in-

sane hospital at Meridian this week. It seemed to be caused by a nervous breakdown.

Our C. C. C. Camp boys are located now one and one-half miles northeast of Louisville. We welcome their physician, Dr. Alexander, who came here from Georgia.

The fathers and mothers of the Scout boys in our city enjoyed an excellent eat at the Community House yesterday, the writer and other doctors being the parents of a number of these boys. The dinner was furnished by the good ladies of the city to aid in procuring national dues for the boys. We are proud of our BOYS.

M. L. Montgomery.

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YALOBUSHA COUNTY

Dr. S. E. Cooper, Water Valley, is visiting his daughter in New York City.

The F.E.R.A. held a clinic at the Water Valley Hospital, November 1 and 2, which consisted of examination of all the handicapped and crippled children of the survey made this summer. A good many of these cases have already been operated upon. The work was under the direction of Mrs. A. L. Robbins, welfare worker for this county and a wonderful lot of good has been accomplished.

Dr. George A. Brown has been appointed member of the faculty of the University of Mississippi School of Medicine.

Dr. Manuel Winter Jackson, Water Valley, is the oldest licensed physician in Yalobusha County and is in active practice. He was born July 22, 1864 in Yalobusha County fourteen miles east of Coffeeville and at the age of two years his father moved to Calhoun County, three miles east of Airmount. He attended the free schools and an occasional subscription school. He attended Bethel College at McKenzie, Tenn., for two terms, 1881 and 1882. He farmed and taught school until 1890 when he attended the Louisville Medical College, Louisville, Ky. April 1892 he went before the District Examining Board at Holly Springs and obtained license to practice medicine in Mississippi. He practiced first at Airmount with his brother for a short time, and then went to Pine Valley for seven years. In September, 1899, he entered the Medical Department of Tulane University where he graduated May 2, 1900. He took post graduate work at the Post Graduate School of Medicine, Chicago, 1904, post graduate course in the Post Graduate School of Medicine, New Orleans, La., in 1908 and another in 1913. Practiced medicine in Banner, and from there he moved to Water Valley in October, 1904, were he has remained. He rode horseback most of the time. His practice covered a large territory. Dr. Jackson has been one of the most successful practitioners in Yalobusha County and is still on the active list. He has worked hard and is a careful observer. He is liked and admired by all who know him.

George A. Brown.

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**THE WOMAN'S AUXILIARY TO THE MISSISSIPPI STATE MEDICAL ASSOCIATION**

President—Mrs. Henry Boswell, Sanatorium.

President-Elect—Mrs. Leon S. Lippincott, Vicksburg.

Secretary—Mrs. Adna G. Wilde, Jackson.

Treasurer—Mrs. C. C. Hightower, Hattiesburg.

Press and Publicity Chairman—Mrs. Hugh H. Johnston, Vicksburg.

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THE WOMAN'S AUXILIARY TO THE ISSAQUENA-SHARKEY-WARREN COUNTIES MEDICAL SOCIETY

The September meeting of the Auxiliary to the Issaquena-Sharkey-Warren Counties Medical Society was held in the Monroe room of the Hotel Vicksburg. There were a large number of members present at the first meeting since the adjournment for summer. A delightful luncheon was served with Mrs. Hugh Johnston as hostess. This meeting was more of a social gathering so there was no program. Old and new business of the auxiliary was discussed. Mrs. D. A. Pettit, first vice-president, was elected president. Mrs. H. S. Goodman's resignation as president having been accepted. The members voted to continue having monthly meetings of the auxiliary as had been the custom in the past. The program for the year was presented and accepted. Plans were discussed for an essay contest to be put on in the schools. The meeting was then adjourned.

It was with much regret that the resignation of Mrs. H. S. Goodman of Cary as president of the Woman's Auxiliary to the Issaquena-Sharkey-Warren Medical Society was accepted. She has been a very loyal member and an efficient officer of the auxiliary having served as president since January, 1934. She has also fulfilled well other offices in the auxiliary. Mrs. Goodman's illness is the source of anriety to her many friends and it is the sincere wish of all that she will soon be restored to her usual good health.

The auxiliary is very fortunate in having Mrs. D. A. Pettit as the new president. Under her leadership another successful year will follow.

There was never a more beautiful day than the one which greeted the members of the Issaquena-Sharkey-Warren Auxiliary October 16 as they gathered for the regular luncheon meeting in the Monroe room in the Hotel Vicksburg. Mrs. Martin was the gracious hostess, having artistically arranged a beautiful table with color motif—yellow. Mrs. Pettit presided at the business meeting.

Mrs. J. A. K. Birchett lead the very interesting

program—current events. Different members participated.

The guests present were Mesdames Preston Herring; Sydney Johnston, Hugh Johnston, Mace Bell, Jack Ewing, George Street, W. C. Pool, D. A. Pettit, Benson Martin, J. A. K. Birchett, and Miss Zita O'Leary.

Mrs. Laurance Clark,
Press and Publicity Chairman.

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### VICKSBURG NEWS NOTES

Dr. and Mrs. B. B. Martin have returned from a delightful motor trip to Chicago and many other interesting cities that they visited en route.

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Mrs. Leon Lippincott and little son, Stanley, are in New Orleans.

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Dr. and Mrs. Hugh H. Johnston have returned form an Ex-Residents' meeting held in Rochester, Minnesota. The visit was not only one of great benefit but one of genuine pleasure since old friends who had spent three years as fellows in the Mayo Clinic met for a home-coming. It was also a happy occasion for the wives to renew their old friendship.

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A marriage of loving interest to many friends was solemnized in the Episcopal Church at Rolling Fork, when Miss Ladye Mary Martin became the bride of Mr. Elkins Taylor of Europa. In the presence of many relatives and friends Bishop Green united in marriage the happy young couple. Mrs. Taylor is the daughter of Mrs. L. E. Martin of Anguilla.

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Dr. and Mrs. Preston Herring and little Helen left for St. Louis, where Dr. Herring will take a post-graduate course at Washington University. Little Helen will visit her grandparents in Trenton, Missouri.

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Dr. and Mrs. A. Street have returned from a very pleasant trip to New Jersey and New York, where they visited Mrs. Street's family and friends. They made the journey both ways by boat. They report a most wonderful vacation.

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Dr. and Mrs. Laurence Clark are the proud parents of a baby girl, Sara Jane.

Dr. and Mrs. R. A. Street are receiving congratulations of relatives and friends over the arrival of little Mary Elise.

Dr. and Mrs. F. M. Smith left by motor Saturday to enjoy the Southern Medical Association which meets in San Antonio. Before their return to Vicksburg, they will visit relatives in Texas, also go into old Mexico.

Dr. and Mrs. Edley Jones are among the number of Vicksburgers attending the meeting of the Southern Medical Association in San Antonio.

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Dr. and Mrs. Pierre Robert left for San Antonio, joining the rank of doctors and wives enjoying the Southern Medical Association there.

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### THE WOMAN'S AUXILIARY TO THE DELTA MEDICAL SOCIETY

The Humphrey County unit gave a benefit party at the home of Mrs. T. J. Barkley, August 14, for the Preventorium Trust Fund and made $27.50. There was a charge of only 25 cents per person. Every one was so enthusiastic over it that another has been planned to be given later at the Woman's Club in Belzoni.

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### THE WOMAN'S AUXILIARY TO THE HOMOCHITTO VALLEY MEDICAL SOCIETY

The Woman's Auxiliary of the Homochitto Valley Medical Society hld its October meeting at the Eola Hotel, Natchez, on October 11, with six members and two visitors present.

Following a delicious luncheon the business meeting was opened by the president, Mrs. E. E. Benoist.

The minutes were read and approved.

A called meeting was scheduled for November 3, at the Eola Hotel.

The auxiliary regretted to learn of Dr. Raymond Smith's critical condition. Mrs. Smith was an active and enthusiastic member of the auxiliary until their departure for Fort Smith, Arkansas.

Mrs. W. K. Stowers,
Correspondent.

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### THE WOMAN'S AUXILIARY TO THE CENTRAL MEDICAL SOCIETY

Mrs. Henry Boswell of Sanatorium was a welcomed guest at the meeting of the auxiliary which met at the Mary Frances Tea Shop Tuesday, October 2. She gave a very interesting talk on "Tuberculosis and It's Prevention." There were forty members present at the meeting.

Mary Sunshine Hooper is a sophomore at Randolph-Macon at Lynchbury, Virginia.

Lucy Rembrandt is at Sweet Briar, out from Lynchbugr, Virginia.

Henrietta Rehfeldt is at Stephens College in Columbia, Missouri.

Harley Shands is at Tulane University. Nugent Shands is at Vanderbilt.

Dr. and Mrs. J. M. Acker are welcomed as citizens of Jackson. They are residing at the State Hospital.

Helouise and Weston Segurd are at Ole Miss.

### HONOR ROLL

The following have contributed to this number of our Journal:

COUNTY EDITORS: L. S. Gaudet, W. R. Brumfield, E. LeRoy Wilkins, L. L. Minor, Wm. F. Hand, W. H. Scudder, J. B. Thigpen, Joseph E. Green, L. L. Polk, W. B. Dickins, G. S. Bryan, R. P. Donaldson, H. T. Ims, J. G. Archer, M. . Montgomery, George A. Brown.—16.

SOCIETIES: Clardsdale and Six Counties, E. LeRoy Wilkins; Issaquena-Sharkey-Warren Counties; North Mississippi, A. H. Little.—3.

WOMAN'S AUXILIARY: Mrs. Hugh H. Johnston, Mrs. L. J. Clark, Mrs. W. K. Stowers.—3.

HOSPITALS: King's Daughters' Hospital, Greenville, John W. Shackelford; Vicksburg Sanitarium. —2.

OTHER CONTRIBUTORS: F. J. Underwood, Kate Lou Lord, L. L. Minor, J. K. Avent, F. G. Riley, Hazel Jones, Mrs. Scottie Kemp.—7.

GRAND TOTAL.—31.

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**MERRY CHRISTMAS**

## BOOK REVIEWS

*A Primer for Diabetic Patients*: By Russell M. Wilder, 5th ed. Philadelphia, W. B. Saunders Co., 1934. pp. 172. Price, $1.75.

At the present time the leaders in the field of diabetic therapy are divided into two schools of thought differing remarkably in their concepts of the metabolic disturbance in this disease, and therefore in the principles of dietary regulation which they follow. In addition to the differences of opinion existing between the advocates of the high carbohydrate diet and those who recommend the high fat diet there has been considerable lack of agreement concerning other less fundamental, though hardly less important procedures employed in the treatment of this disease. Notable among the latter is the controversy over the method of measuring foods; some requiring that foods always be weighed, and others regarding the use of household measurements sufficiently accurate for clinical purposes. It is not difficult to understand, in view of all these differences of opinion, that no single diabetic primer can be devised which will serve all satisfactorily. Those who adhere to the high fat diet and to the weighing of foods will find the fifth edition of Dr. Wilder's Primer an excellent guide for their patients' and for their own use. The chapters on Insulin, Gangrene and Skin Infections, and Diabetic Acidosis and Coma present, in inimitable fashion. information which is extremely important as a guide to the patient in many situations. The nomogram is used in determining the required total food intake. The standards used in making these computations probably apply in the North but will undoubtedly be found excessive by physicians in the South.

MANUEL GARDBERG, M. D.

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*The Sinister Shepherd*: A Translation of Girolamo Fracastoro's Syphilidis Sive De Morbo Gallico Libri Tres, by William Van Wyck. Los Angeles, Primavera Press, 1934. pp. . Price, $3.75.

Four hundred and four years have passed since Girolamo Fracastoro penned his immortal poem. It has been translated into many languages. There are various well known prose adaptations, and in London in 1685, Nahum Tate, who later became Poet Laureate, published his "Poetical History of the French Disease" which was based on Fracastoro's masterpiece, but was in no sense a translation. However, not until now has a complete and literal English translation appeared. During these four centuries this, one of the most fascinating documents in the annals of medicine, has escaped all of the restless linguists who search countless volumes of forgotten lore eager to pounce upon any important work and every interesting one. Such a tragic oversight is marvelous to relate, although it is no stranger than the fact that Fracastoro's more significant prose treatise De Contagiosis Morbis et eorum Curatione, which he wrote in 1546, after sixteen years of tireless research, was first translated into English in 1930, not by a medico but by, of all people, William Cave Wright, Professor of Greek at Bryn Mawr College. Where were all of our medical savants, those polygot dilettantes who are the great of the profession? During the golden age of syphilology through which we have just passed, why should not some serious syphilographer, in his reclining moments or declining years, have done the obvious? Dr. Wright's accomplishment must have afforded him more than the usual amount of fun that is derived from a thunder steal. Wright's and Van Wyck's tardy feats are welcome ones, and although the former's is no mean contribution, it presented none of the difficulties that must have beset the latter when he converted Latin hexameters into meter, perfect, if perhaps not always sense clear English. Overlooking an occasionally insinuated monosyllable such as a "so," and accepting a few ambiguities, you will thrill to the stirring beauty he has managed to preserve. You will appreciate too what prompted Fracastoro's contemporary Sannazaro, the most accomplished poet of his day, to declare that Fracastoro's hexameters were superior to his own.

The familiar story of the Sinister Shepherd follows the traditional mythological style. Syphilus,

shepherd of King Alcithous, is provoked when Sirius, with his mighty flame sears the land, destroying the shade and barbecuing his bulls without benefit of preliminary slaughter. He rears an altar to his mundane master to spite the gods for such a dirty trick and for his king he reserves frankincense, honoring him as a God and causing him joy immense. To punish the sacriligious shepherd the gods send a plague which henceforth is named Syphilis, after the hero. The plague is not intermitted until Carthesis, acting on the advice of the dryad (good old nick of time nymph), makes the people erect altars to Juno and Tellus and bring sacrifices. When at length, the anger of the gods is assuaged, the Lignum Sanctum sprouts up and its bark provides a miraculous cure for the malady.

In his introduction, Van Wyck gives his reasons for taking the trouble to translate the Syphiliad. On a rebound from the milk-and-water figments of imagination that characterized the writings of the past generation, it is a relief, claims he, to delve into intimacies of a vulgar and revolting nature such as emotions due to sex repressions or the condition of one's genito-urinary tract. It is therefore, refreshing to return to Fracastoro, who sang of syphilis in three books, without being hampered by the embarrassments of a more enlightened day. When Fracastoro lived no opprobrium was attached to the disease; in fact it was considered to be as devoid of sin as whooping cough, explains Van Wyck.

An introduction by Albert Garrigues contains the high lights of the life of the Veronese poet. There are ten illustrations which include the Marcolini and the de Larmessin portraits and of course Durer's "A Syphilitic."

MAURICE SULLIVAN, M. D.

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*Medicine Man in China*: By A. Gervais (Translated from the French by Vincent Sheean). New York. Frederick A. Stokes Co. 1934. pp. 336.

This is a psychological narrative by a young French physician, who recounts his personal and professional experiences in a quasi-government medical school and hospital in Chengtu, Szechuan, the capital of the westernmost province of China, during the past decade. Stimulated by a genuine ambition to fathom the Oriental viewpoint and professionally qualified to obtain first-hand information, Dr. Gervais encountered one obstacle after another, without loss of his original aim and purpose.

While the medical side of his work is subordinated to the sociological and philosophical, there are instances which clearly portray the opposition of the Orient to Western medicine. This is particularly illustrated in his chapter on cholera: "Land of Asia, ant-heap of men! Land of paradox, where the dead are venerated like gods, where the love of children amounts to adoration, where the family, united by traditions as old as the race, . . . remains the changeless armature of a decaying society, . . . and where man counts for so little . . . One may say that the race . . . disdains these plagues, . . . paying with their individual defeat for the irresistible vitality of their race . . . Cholera reigned supreme in the Chinese city . . . The inertia of the authorities was complete . . . 'If the cholera spreads, it will make indispensable vacancies in this overpopulated province, and will allow the survivors to eat and live' . . . The check to our plans was complete; . . . given the ease of contagion, the absence of all protection for health, the exceptional virulence of the vibrions, the primitive system of transport of human refuse in the town, . . . nine-tenths at least of the population of Szechuan must inevitably disappear. In spite of this gloomy prophesy, the cholera ceased of itself at the beginning of the cold season, and ten per cent of the inhabitants, at most, had disappeared."

Likewise, the methods by which human dissection of executed criminals became established in the medical school by military edict, after the governor had at first decided on and was later dissuaded from enforcing vital dissection of a convict as an object lesson to bandits and thieves, reads more like fiction than fact.

The treatment of the material is sympathetic, though candid and not always flattering to either the Chinese or the Westerner. The style is lucid and the translation, good. The book is well printed. It is recommended for perusal after a heavy day's work.

ERNEST CARROLL FAUST, Ph. D.

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*The Spastic Child*: By Marguerite K. Fischel, St. Louis. The C. V. Mosby Company, 1934. pp. 97.

This book is written by a layman, the mother of two spastic children. It is a record of her experiences both with the disease and the treatment. It is remarkable to note the excellent results she obtained. She is guided and advised throughout by medical men and expert teachers of the handicapped child. The book is well written and illustrated, making the section on muscle training most comprehensible.

One may recommend this book for all doctors who are interested in the spastic child. It is especially excellent to recommend to parents, teachers, and nurses. It will certainly offer them much hope.

JULIAN GRAUBARTH, M. D.

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*International Clinics*: June, 1934. Philadelphia, J. B. Lippincott Co., 1934. pp. 317.

This volume contains several articles of great interest to the surgeon and physician. Splendid, comprehensive articles devoted to operative shock,

collapse therapy of pulmonary tuberculosis, medical and surgical aspects of peptic ulcer, the crippled hand, generalized edema associated with gastro-intestinal disease, are medical subjects indispensable to one who desires to keep abreast of the rapid advancement in medicine. Recent progress in obstetrics and pediatrics with especial reference to the toxemias of late pregnancy and the immunization against diphtheria and scarlet fever are thoroughly concise and up to the moment. This volume merits your careful attention.

I. L. Robbins, M. D.

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*Posture—Its Relation to Health*: By Frank B. Dickson, M. D. Philadelphia, J. B. Lippincott & Co. 1931. pp. 213, illus.

The title of this volume is somewhat misleading. One might assume that the volume concerned itself with an exposition of those variations in body statics that cause vague and indefinite symptoms such as are characteristic of viseroptotic and allied lesions. Actually, a major portion of the book is devoted to a dissertation on primary orthopedics.

The author gives a rather complete discussion of conditions related to disease states which cause or are the result of, faulty posture or poor body statics including visceroptosis, childhood deformities of the lower extremities, scoliosis, low back pain, arthritis and orthostatic albuminuria. The basic anatomy of normal and abnormal posture is reviewed. This is correlated with the various conditions discussed. An attempt is made to outline an anatomophysiologic basis for treatment.

The author makes free use of orthopedic appliances in correction of deformities. One salient feature in this section of the book is the discussion of the treatment of knock-knees and bow-legs by conservative means. Probably a majority of orthopedic surgeons prescribe outside elevations on sole and heel for the correction of the latter. Dickson makes a plea for the handling of both of these conditions in exactly the same manner, i.e. by using inner sole and heel lefts, plus a felt arch support.

But slightly over twenty pages are devoted to an exposition on exercise. A short space is given to an enunciation of the underlying principles of the indications for and the practice of physiotherapy.

The author's fundamental idea is best expressed in his own words, "Correction of postural defects is not a 'cure all' for all ills to which man is heir. It probably is not a cure for any specific abnormal condition . . . it is worthy of serious thought and study."

The book is written in a pleasing style and there are numerous apt illustrations. It is recommended particularly for those in general practice who occasionally or habitually deal with the treatment of architectural deformities.

A. Scott Hamilton, M. D.

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*La Cirugia Gastrica—A treatise in Spanish on the Surgical Diseases of the Stomach*: By Dr. Manuel Corachan, extra mural professor of Surgical Pathology; surgeon to the Holy Cross and St. Paul Hospitals of Barcelona, Spain. Salvat, Publisher, Barcelona, 1934.

Many monographs and treatises on Gastric Surgery have appeared in recent years as contributions from distinguished surgeons who, in different countries, have specializd in this all important field of abdominal surgery, but we can safely assert without fear of contradiction, that the great work which Dr. Corachan has just launched from the Salvat Press in Barcelona, surpasses by far in the breadth of its scope and thoroughness of treatment, any treatise, past or present, that has been dedicated solely to this subject.

It will suffice for any surgeon who is at all familiar with the vast and growing international literature that has sprung up about the problems of gastric pathology, to realize that this is a monumental work intended to encompass within its printed pages all the knowledge that is at present available to the surgeon who is ambitious to master all the recognized methods of relief that surgery has to offer for the cure of gastric disorders. But the purpose of this book is not merely to compile an encyclopedia of facts and theories; it is a treatise based upon the author's personal experience as an operator of recognized skill and discerning judgment who has profited by his large and commanding clinical resources to exercise his critical faculties with all the wisdom and authority that is given only to a master. In the attainment of this purpose, the author and his publishers have spared no time, labor or expense to make this great work worthy of its purpose.

This is the first of two large royal 8° volumes that will complete the treatise when finished. The book is presented in a most attractice and artistic binding with gilt edges in harmony with the wealth of information that it contains. Between its covers it embraces 794 pages of text with 375 illustrations, the majority, reproductions in natural color, of original pathologic specimens and histologic sections taken from the author's collection as this has accumulated in the last 30 years. The book is divided into twelve chapters which cover all the phases of Gastric anatomy, physiology, biochemistry and pathology that are pertinent to an intelligent appreciation of the methods of clinical exploration and diagnosis which are historically, technically and critically reviewed with the aid of all the resources of the illustrator's art. These include the most recent advances in the chemistry, radiology, chromoscopy, gastrography, gastro-

metry and gastroscopy, etc. (140 p.) that are indispensable for a thorough appreciation of the clinical pathology that follows in the chapters on gastric ulcer, chronic gastritis (101 p.); cancer, the benign growths and specific infections, in all their complex etiologic, pathogenic and diagnostic phases and their surgical indications. These constitute the *pieces de resistance* and most original sections of the work, though by no means too important to neglect other diseases or lesions of the stomach that may have any relation with surgical treatment.

Following each chapter is a copious bibliography of quoted references which show the author's mastery of the international literature, and what is not unusual in the majority of European texts, is the impartiality of he citations as attested by the author's unfailing reference to the latest American conributions.

The second volume, which is now in press, will deal with the surgical therapeutics and operative technique, in which Dr. Corachan's great experience, vast learning and discriminating judgment will be shown to the best advantage in dealing with contraverted questions.

The book is prefaced by Dr. Ribas y Ribas, one of Corachan's teachers; himself, a pioneer in gastric and abdominal surgery and an outstanding medical personality in Barcelona.

The writer of this notice has seen Dr. Corachan in action and has enjoyed the hospitality of his clinic and those of all the leading surgeons and teachers who are at the head of the hospitals, academies and related medical institutions of Barcelona. As a result of his experience, he has been impressed with their academic and scientific culture, their enterprise, their skill and their restless activities in keeping in the race of professional progress and, no less, their courtesy and their kind and sincere consideration of the visiting doctors. All this makes the writer regret that the splendid opportunities for surgical observation and study offered by the medical institutions of the beautiful and enterprising Catalonian metropolis should be lost to the majority of American tourists who seldom cross the Pyrenees in quest of medical knowledge, under the mistaken impression that there is nothing to learn in Spain outside of History, Art, Religionus architecture, or perhaps, the dubious surgery of the bull ring. It is pleasing to note in contrast with this narrow and prejudiced view, that scientific surgery not only flourishes plentifully in Spain, but that it rises at a single bound, as we see it in Corachan's book, from the obscure plane of its unrecognized possibilities to the highest summit of surgical learning and achievement.

R. MATAS, M. D.

## PUBLICATIONS RECEIVED

Charles C. Thomas, Springfield, Illinois and Baltimore, Maryland: Amebiasis and Amebic Dysentery, by Charles F. Craig, M. D., M. A. (Hon. Yale), F.A.C.P., Colonel, United States Army. Retired, D.S.M. Clinical Pathology of the Jaws, by Kurt H. Thoma, D. M. D.

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William Wood and Company, Baltimore, Maryland: Veterinary Helminthology and Entomology, by H. O. Monnig, B. A., Dr. Phil., B.V.Sc.

C. V. Mosby Company, St. Louis: Diabetic Manual for Patients, by Henry J. John, M. A., M. D., F.A.C.P., Maj. M.R.C. Synopsis of Genitourinary Diseases, by Austin I. Dodson, M. D., F.A.C.S.

Paul B. Hoeber, Inc., New York: Minor Surgery in General Practice, by W. Travis Gibb, M. D.

Lea & Febiger, Philadelphia: Obstetric Medicine, edited by Fred L. Adair, M. A., M. D., F.A.C.S. and Edward J. Stieglitz, M. S., M. D., F.A.C.P. Text-Book of Pathology, by William Boyd, M. D., M.R.C.P., Ed., F.R.C.P., Lond., Dipl. Psych., F.R.S.C. Autonomic Nervous System, by Albert Kuntz, Ph. D., M. D.

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Bailliere, Tindall and Cox, London: Aids to Obstetrics, by Leslie Williams, M. D., M. S. (Lond.), F.R.C.S (Eng.), M.C.O.G. Aids to Osteology, by Philip Turner, B. Sc., M. B., M. S. (Lond.), D.S.C. (Lond.), F.R.C.S. (Eng.), F.R.S. (Edin.).

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